



WGFD HPP <wgfd.hpp@wyo.gov>

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## Sage grouse

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**Adrian Prophet** <adrianprophet@gmail.com>  
To: wgfd.hpp@wyo.gov

Tue, Apr 16, 2019 at 2:47 PM

The environmental groups warned about oil and gas development before the first well was punched in the Alpine Anticline.

The bureau of land management didn't listen before; what makes you think they will listen this time? The BLM is only interested in writing oil and gas leases. shady politicians taking bribes from energy companies is the norm in Wyoming.



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Comments on Sage Grouse Executive Order

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**Armond** <anacri\_wwf@hotmail.com>

Tue, Apr 30, 2019 at 8:48 PM

To: "wgfd.hpp@wyo.gov" &lt;wgfd.hpp@wyo.gov&gt;

In the past, I have supported the Executive Order protecting Sage Grouse. I am concerned that recent efforts by the Federal Government to weaken protection for Sage Grouse make it even more important for Wyoming to step up to protect Sage Grouse. The Executive Order should not be weakened. We must not lose sight of the goal, which is to avoid listing Sage Grouse.

I am concerned about recent events such as the proposal to allow leases in areas such as the "Golden Triangle." I now question the ability of the Executive Order to protect Grouse. Because the Core Areas represent the best habitat for Sage Grouse and the best chance for avoiding listing, I believe it is time to consider not allowing any development in the core area. I realize the Executive Order currently says the State will encourage development outside the Core Area. I no longer think that is enough. Since the core area is not that big, it would not be as big a hardship as closing the entire state if the Sage Grouse is listed. We can allow development in the rest of the State. I would point out that although the concepts for protecting Sage Grouse are based on science, they have not been tested on a large landscape. We should not risk the future of Sage Grouse on untested theories. We should proceed slowly and cautiously until we are sure we actually have the protections we think we have.

If we do not close the core area to development, it is important to reduce activities when monitoring shows that Sage Grouse populations have declined. It is time to stop making excuses for "seasonal variations." We must control what we can control, and stop making excuses like blaming the weather or drought. We cannot control the weather or drought, but we can control human activity. When populations decline, we should remove pressure from human activities. We run the risk of riding the Sage Grouse population into the ground if we continue to use a running 5 year average.

The Executive Order has a goal of maintaining the current population of Sage Grouse. That is the minimum acceptable outcome. I believe the goal should be to increase populations. Managing to the minimum is a good way to fail.

Thank you for listening to my comments.

Armond Acri

Jackson, WY

Sent from [Mail](#) for Windows 10



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Comment on sage grouse management

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**Bayard Rea** <bdrea@tribcsp.com>

Tue, Apr 9, 2019 at 5:03 PM

To: wgfd.hpp@wyo.gov

To: Governor Gordon:

In accordance with your request for public comments re: sage-grouse management, I submit the following:

I believe that is paramount to remember that Wyoming's wildlife is the property of the state. Management of sage grouse, therefore, should prioritize the protection of the sage grouse and their habitat. This can be implemented through regulation of drill-site locations and drilling operations by the Wyoming Oil and Gas Conservation Commission in cooperation with the Game and Fish Department.

Wyoming should take pride in bringing all parties together to develop the current system of management. The "core-area" concept is working and is accepted, even if grudgingly, by the concerned corporate interests. Weakening the current management system would likely lead to the final listing of the grouse as an endangered species and result in far more restrictive regulations on oil-and-gas development.

We have a working system. "If it ain't broke, don't fix it"!

Finally, I have just learned of the successful meeting yesterday between Gov. Gordon and representatives of the National Audubon Society and Audubon Rockies (on whose board I serve). This is a hopeful sign that the current spirit of cooperation can continue.

Thank you for the opportunity to participate in this important discussion,

Bart Rea

5200 Yesness Lane

Casper, WY 82604

[bdrea@tribcsp.com](mailto:bdrea@tribcsp.com)



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## SGEO Comments - Bighorn Basin Local Working Group

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**Leslie Schreiber** <leslie.schreiber@wyo.gov>

Tue, Apr 30, 2019 at 2:42 PM

To: WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

HPP,

I am submitting SGEO comments on behalf of the Bighorn Basin Local Working Group. Please see attached.

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**Leslie Schreiber**, Certified Wildlife Biologist®  
Sage-grouse/Sagebrush Biologist  
Wyoming Game & Fish Dept.  
[231 Pheasant Dr](#)  
[Greybull, WY 82426](#)  
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**Bighorn Basin Local Working Group Comments to Sagegrouse EO.docx**

20K

**Bighorn Basin Sage-grouse Local Working Group**  
**Comments on the Sage-grouse Executive Order 2015-4**

**April 30, 2019**

Page 6 of 7 (Now Therefore Statements)

The Group recommends a new statement #24 be added: The State of Wyoming will continue to support well-regulated, sustainable hunting of viable sage-grouse populations. Sage-grouse hunting creates a constituency of advocates that promote sage grouse population viability and healthy sagebrush habitats. In addition, their license fees provide valuable revenue for management. The US Fish and Wildlife Service did not view regulated hunting as a significant threat to sage-grouse in their assessment of threats in the 2015 not-warranted listing decision.

Attachment H – pdf pg. 44

Regarding off-site compensatory mitigation, the Group recommends establishing mitigation banks within the geographical boundaries of each of the 8 local working groups so that habitat disturbance can be mitigated within the same localized area. The Group is strongly opposed to centralizing mitigation credits in only 1 statewide bank. However, the Group recognizes that currently only 1 mitigation bank exists for which to implement the compensatory mitigation framework. The Group recognizes and understands the difficulty and rigorous requirements necessary in establishing new mitigation banks, but urges the State of Wyoming to work through this process so local banks may be established in the future.

Additionally, the local working group desires to provide input to the decision-making body (possibly the Compensatory Mitigation Oversight Group) when compensatory mitigation credits are considered for allocation. The local working groups have the most knowledge of their respective geographic area, therefore, providing optimum benefits to sage grouse and sagebrush habitat when applying mitigation credits.

Bighorn Basin Local Working Group Members as of March 21, 2019:

- |                     |                        |
|---------------------|------------------------|
| 1. Keith Hamilton   | Agriculture            |
| 2. Tim Stephens     | BLM                    |
| 3. Rich Olson       | Conservation           |
| 4. Mike Baker       | County Government      |
| 5. Vance Lungren    | Conservation Districts |
| 6. Chris Pfister    | Conservation           |
| 7. Alan Hogg        | Agriculture            |
| 8. Jonathan Madill  | Mining Industry        |
| 9. Marvin Blakesley | Oil & Gas Industry     |
| 10. Rory Karhu      | NRCS                   |
| 11. Sam Stephens    | WGFD                   |
| 12. Larry Heiser    | Public-at-large        |



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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**In response to Gov Mark Gordon public input on potential revisions to sage grouse strategy.**

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brfortner@vcn.com &lt;brfortner@vcn.com&gt;

Thu, Apr 4, 2019 at 6:30 AM

To: wgfd.hpp@wyo.gov

Need to do 3 things to have a complete Sage Grouse strategy. Currently habitat management is only half of a strategy. Sage grouse numbers have to be the other half. There are 3 ways to do this. No 1 Stop the hunting of sage grouse. It looks very reckless and throws up Red Flags for environmental groups. No 2 Control predators, nest robbers and possibly relocate raptors. Birds are on the top of the food chain for predators. I use to loose 60 guinea hens a year to predators that came off of coal mine property that borders mine. I retired one of my guard dogs and moved her to the house since I have not lost any birds to predators. No 3 Control the spread of West Nile by mosquitoes. Ways to pay for these 3 steps is industry oil, coal, and gas, needs to pay a predator control fee as well as the contractors that work in those industries. Sports men hunters and fishermen, guides, as well as people use state parks for camping pick nicking ect should pay a predator control fee as well. The cattle and sheep men have paid for predator control for decades. We cant say our sage grouse strategy is working if were not using population numbers to measure success. If some one ask for prove and you have none it will be devastating for Wyoming and all that live here.

My name is Bill Fortner I am a 5th generation Campbell county native. I worked on the family ranches and worked in the coal, oil and gas for 40 years and I would sure hate to loose it because of the mismanagement of a threatened species such as sage grouse. I believe it is vital to use these steps with the pay out method suggested in conjunction with the previous plan. If we do not do some thing like this I believe the listing of sage grouse to the endangered spices list is inevitable. Thank you for this opportunity to express my views.



WGFD HPP <wgfd.hpp@wyo.gov>

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## Sage Grouse

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**Billie Dutcher** <dutchers@wyoming.com>  
To: wgfd.hpp@wyo.gov

Fri, Apr 5, 2019 at 9:24 AM

Please protect our sage grouse. Don't allow mineral extraction, oil and gas development or cattle grazing near grouse strutting grounds.

Billie Dutcher



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Comments on Wyoming Sage-grouse Executive Order 2015-4

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**Brian** <bstrampe@wyoming.com>

Fri, Mar 8, 2019 at 2:44 PM

To: wgfd.hpp@wyo.gov

Cc: bstrampe@wyoming.com

Deer Wyoming G&F, (and yes I have lost a lot of sleep writing these comments!)

Attached are comments that I believe are meaningful for considering for the update of the EO and for sage grouse conservation in Wyoming.

Thank you for taking public comments on this very important issue for Wyomingites.  
May God help us.

Sincerely,

Brian Strampe



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**B Strmpe Comments on SGEO 2015-4 3 8 19.docx**

31K

To: [wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

March 8, 2019

From: Brian Strampe

RE: Comments on Wyoming Sage-grouse Executive Order 2015-4

Below are areas of the EO that I believe need to be updated with new scientific information as requested by Karen Rodgers 2/21/19 email to "update the Sage-Grouse Executive Order (SGEO)":

1. **Noise ( EO P8 Attachment B)**, suggests noise levels should not exceed 10 DB L50 above baseline at the perimeter of a lek from 6pm to 8am during breeding season March 1 to May 15. Specific noise protocols for measurement and stipulations for implementation will be developed as additional research and information emerges.

**Scientific information (reference #1) suggests:**

"that management strategies be expanded to protect the soundscape in areas critical for mating, foraging, nesting, and brood-rearing activities of sage-grouse, rather than protecting the lek area alone;"

**Scientific information (reference #2) suggests:**

"Peak male attendance (i.e., abundance) at leks experimentally treated with noise from natural gas drilling and roads decreased 29% and 73%, respectively, relative to paired controls."

"Our results suggest that sage-grouse avoid leks with anthropogenic noise and that intermittent noise has a greater effect on attendance than continuous noise."

**Scientific information (reference #3) suggests:**

"Taken together with results from a previous study finding declines in male lek attendance in response to noise playbacks, these results suggest that chronic noise pollution can cause greater sage-grouse to avoid otherwise suitable habitat, and can cause elevated stress levels in the birds who remain in noisy areas."

2. **Transportation (EO P7 Attachment B)**, indicates "Locate new collector or arterial roads that will have relatively high levels of activity greater than 1.9miles from the perimeter of occupied GSG leks. Locate new local roads used to provide facility site access and maintenance greater than 0.6 miles from the perimeter of occupied GSG leks."

**Scientific information (reference #1) suggests:**

"Roads should be sited or traffic should be seasonally limited within 1.3 to 1.7 km from the edge of critical areas for nesting, foraging and breeding"

“management strategies be focused on the siting of roads or limiting of traffic volumes during crucial times of the day (0600 to 0900 hours) and season (i.e., breeding season), rather than setting targets for vehicle noise exposure.”

3. **Wind Energy Development (EO P14 Attachment B)**, “Wind development is not recommended in GSG core population areas, but will be reevaluated on a continuous basis as new science, information and data emerges.”

**Scientific information (reference #4) suggests:**

We detected a 56% drop in lek counts at treatment leks relative to control leks assuming the effect of the wind energy development was realized between 2010 and 2011 (i.e., 3yr post development).

Use of a posteriori power analysis estimated similar data sets would have 80% probability of detecting a 28% decrease in the rate of decline of lek counts at treatment leks relative to control leks after development.

We recommend additional research and an abundance of caution in designating buffer sizes <1.5km to avoid measurable effects from wind energy development on males attending leks.

**Scientific information (reference #5) suggests:**

Based on our analysis, we recommend facilities that are similar in size that occupy similar habitats as our study be placed 1.20 km from any occupied nesting, brood-rearing, or summer habitats.

4. **Update EO on the On Going Core Area Strategy Effectiveness**

**Scientific information (reference #6) suggests:**

“Using Bayesian binomial probability analysis, we found an average 10.9% probability of lek collapse in Core Areas and an average 20.4% probability of lek collapse outside Core Areas. Using linear regression, we found development density outside Core Areas was related to the probability of lek collapse inside Core Areas. Specifically, probability of collapse among leks > 4.83 km from inside Core Area boundaries was significantly related to well density within 1.61 km (1-mi) and 4.83 km (3-mi) outside of Core Area boundaries. Collectively, these data suggest that the Wyoming Core Area Strategy has benefited sage grouse and sage-grouse habitat conservation; however, additional guidelines limiting development densities adjacent to Core Areas may be necessary to effectively protect Core Area populations.”

5. **Clarification of Plans for “Mitigation” EO #2 P5 Attachment A and Attachment H.**

References to compensation and mitigation of the GSG resource in the EO are almost void of how these conservation programs are supposed work. I need to suggest that the details of these programs be more specifically identified for the public to understand.

**6. Clarification of Monitoring/Adaptive Response EO P10 Attachment B**

Can the data generated by this program be available to the public to understand how and where this part of the core area strategy is being applied? Or if this data is already available, can the EO reference where it can be accessed? What happens when the operator of the new project changes ownership and finally goes into bankruptcy as is common practice in industry?

**7. Game Farming of GSG:** Game farming of GSG was adopted in Wyoming in 2017 and the EO should recognize the importance of this event. P3 of attachment #A indicates: "Beginning in 2007 the SGIT was charged with three primary tasks: ... to reduce or eliminate potential threats to the species, ..."

The North American Grouse Partnership indicates "NAGP strongly opposes the use of captive reared birds as a form of mitigation or compensation for any impacts associated with habitat loss, fragmentation and degradation from authorized actions by the State of Wyoming or [r] Federal Agency."<sup>9</sup>

It doesn't take any imagination to envision a real potential threat to the species by the introduction of a new disease with no immune resistance to the native GSG population resulting from game farming of this native wild species. This is because similar unintended consequences have already happened in the NE portion of the state when excess ground water pumped to the surface during the development of coal bed methane wells and the effects of West Nile Virus on GSG mortality in the area. The decreased population effects on GSG resulted in the loss of "existing activities", namely hunting, having emergency closure of three counties to hunting in 2003 due to the West Nile virus outbreak. As of 2010, the NW section of Wyoming has a 3 day season of 2/4, with about half of the eastern portion of the state being closed for hunting. Far from the 30 day state wide season of 3/6 which existed in 1994. Putting the remaining "use" in terms of a percentage, this single multiple use activity in this area of the state lost more than 93% of the resource that was available in just over 7 years. A hallmark of sound conservation management of Wyoming and the WG&F, has been the absolute rejection of game farming of native species (and exotic species) in the state, and for very sound scientific reasons. Until the Wyoming legislature allowed the game farming of GSG. Although not stated in the EO, it seems this is a misguided attempt to use game farmed sage grouse (a currently fictitious population of a domesticated wild species which very likely would be non-functioning in the wild) in the EO referenced "Compensatory Mitigation" program (Attachment H of EO), and the reference to "Mitigation" in item #2 P5 Attachment A "...when core population area thresholds are exceeded, compensating for any unavoidable impacts to GSG." For the EO to actually imply that should the core conservation strategy actually be intentionally designed not work, and

somehow compensation or mitigation by a fictitious quantity of farmed sage grouse will work is entirely irresponsible. ““Birds could also be distributed into the wild as a mitigation factor for industrial development,” True adds.”<sup>7</sup> The SGIT and the EO are not fulfilling their stated charge to “reduce or eliminate potential threats to the species” by allowing the threat of unintended consequence of disease brought about by game farming GSG. Does not CWD ring a warning bell? In future years, will we be discussing the consequences of disease (as yet unnamed) in SG initiated by game farming SG where pheasants, chuckers, or hunts have been/are being game farmed? The beauty about unintended consequences is that no one is ever able to be held responsible as the root origin of the problem is very difficult to determine with certainty, and in part because no organization has pockets deep enough to compensate for the amount of damage inflicted. Was responsibility ever taken to “mitigate” or “compensate” the state for the unintended consequences to GSG of west Nile virus on GSG in Wyoming, or CWD on deer/elk/moose?

If this risk is not detrimental enough, further thoughts of those heading GSG farming efforts are ““In 2008, we were beginning to take a habitat approach to preserve the sage grouse,” he says. “If a pilot project worked to breed sage grouse, there was a concern that habitat efforts would be abandoned. The state of Wyoming and WGFD had an enormous commitment to habitat improvement, so the effort was delayed.” Secondly, the birds could be used to stock areas of critical habitat that currently do not have sage grouse population.”<sup>7</sup> It appears that much of the thought (and possibly the worst threat) of game farming is actually a bait and switch strategy. Don’t concentrate on a “habitat approach” to GSG conservation, we can raise sage grouse and stock them in whatever habitat remains. What a minute, the EO states “understand that the primary mission is avoiding impacts to and protecting the best remaining habitat for Greater sage-grouse...” Ok EO, which one is it? There is a reason why sage grouse no longer live in areas of the state, that is because the habitat will not support them. Do you really think and a farm raised GSG can successfully live in habitat that a wild native GSG cannot? Wow, this thought process is so far out of bounds of reality that it is embarrassing, especially coming from a SGIT member and a very influential member of the Wyoming State Legislature, and is very dangerous to the whole EO core area conservation program and a threat to Wyoming’s way of life. I understand that if sage grouse could be raised in captivity, like pheasants, that it would be wonderful. But, GSG are far different than pheasants, the technical, financial, and as yet unknown hurdles are so much more difficult, and the risks so much more real than very highly unlikely minute possibility that captive bred GSG would ever be a realistic mitigation for the “real deal”. This situation would be embarrassing if this was happening out of ignorance, but yet even worse, it is obviously being done out of intention. And even worse yet, it allows private ownership of a public resource! Will the EO just let the O&G industry hood wink Wyoming citizens to discard “the wild” in wildlife, privatize native species, allow game farming of native birds, deer, elk, bison, and all exotic species, as is done in many other states and make us live with the irreversible damage to native species and our way of life? Such a blatant, intentional, and unscientific undermining by special interests of Wyoming’s

wildlife makes the “Green New Deal” actually appear a more reasonable, harmless, and a realistic alternative as a possible conservation strategy for Wyoming than game farming. At least the “Green New Deal” would likely have one silver lining, the “green new deal” gets implemented, and the largest threat to GSG persistence (according the USF&WS) is eliminated. The O&G industry has this distinction not because the resource cannot be developed responsibly and economically, but that the industry has intentionally chosen to make it so. The last time I listened to the national news, every 2020 presidential candidate that has announced their candidacy has endorsed the “Green New Deal”. By the O&G industry being so arrogant, creating so much unnecessary environmental damage, not working in good faith with other multiple use stakeholders, hood winking the public into self serving unnecessary boom and bust after boom and bust developments with the state routinely holding the reclamation and mitigation bag, and now trying to move Wyoming’s Conservation strategy away from a habitat centered “approach”, the industry actually may have a high probability of putting themselves out of business. Currently, the “Green New Deal” has a much higher probability of successfully being implemented than successfully raising sage grouse as an industry mitigation conservation plan. Please stop this insanity for the sake of our future! Wyoming’s multiple use stake holders must work together or our way of life will be lost. We may only have 1 year left to control our own future.

I must suggest that the EO be updated with some information (factual, ie not from special interests in the legislature) on the issue of game farming GSG in Wyoming, the real risks involved in overly embracing this unproven mitigation effort, how it has changed the foundation of conservation in Wyoming, and how game farming GSG is actually being envisioned to be part of the EO core area strategy.

**Below are areas that are my own opinions on improvements that could be made to the EO and trust it can be considered as part of public input:**

**8. Hunting: #2 P4 of EO indicates:** “Valid existing rights shall be recognized and respected.

...Examples of existing activities include oil and gas, mining, agriculture, processing facilities, housing and other uses that were in place prior to the development of the Core Population Areas.”

I cannot find any reference to hunting of sage grouse in the EO, either as an “existing activity” or a “de minimus” activity.

I would propose that the privilege (not a right) to hunt GSG as managed by the WG&F Dept. be at least mentioned and this activity be recognized as a member of the multiple use community in the EO as a valid “existing activity”.

**9. Core Area Strategy Limits the Evaluation of the GSG Resource in Two Categories Core & Non-Core.** Almost completely defining the GSG resource into only two parameters of “some”

resource (non-core) and “more” resource (core) limits the proper evaluation of the resource. Do any of the other multiple use stake holders evaluate resources on public land with just two parameters? Not treating lek size as a marker of the most important GSG habitat, and not requiring different conservation methods for the significance in the importance of lek populations, is a gaping hole in the core area strategy, and is at the core (pardon the pun) of the current discussion about O&G leasing in the golden triangle. Item #2 p5 Attachment A of the EO indicates “The strategy follows an established hierarchy of avoidance understanding that the primary mission is avoiding impacts to and protecting the best remaining habitat for Greater sage-grouse;”. This tenant of the core strategy is not being fully utilized. Not using lek size as a conservation parameter for conservation efforts of GSG is like the O&G industry not being able to use the quality and quantity of O&G underground reserves in selecting leases and obtaining permits to drill. How effective would it be if O&G reserves were evaluated as “some” and “more”, and the resource managed based on only two parameters? A strategy to conserve GSG without considering lek size as an important parameter in the evaluation of the resource (the best indication of quality and quantity of the resource) is missing a very important management tool. When oil and gas leases are announced, the general public cannot fully comment on the issues as lek locations and their populations are not public information. Nor is the resource size of the O&G reservoir public information to compare the relative importance of each. In the current discussion on the leases sold in the golden triangle, 31 leases were proposed to be deferred out of 708 being sold or 4.4%. Compared to the ~109,803 leases already on BLM land in Wyoming or 0.028%, how important to the O&G industry could these 31 leases be compared to the importance of this habitat being the best for GSG in the world? I understand that the permit stage after the lease has been purchased is where stipulations are assessed, but as far as I know, there are no different stipulations applied, as a matter of “automatic” current policy procedure, when developing around a lek of 10 or 300. The use of lek size needs to be incorporated into the WG&F and BLM evaluation of how critical the habitat is to the resource. As a member of the public, I need to suggest that the EO address how to use lek population as a more valued marker of the value of the resource in the core conservation strategy.

#### **10. EO Relying too Heavily on Reclamation and Compensatory Mitigation to “Assure Perpetuation of the GSG species”**

It is arguable that reclaiming habitat to previous resource quality is in reality not actually technically feasible, but has certainly been proven time and time again to be highly economically not possible. There is a reason why O&G development was rated by the USF&WS as the highest priority threat to GSG in Wyoming. When roads, pads, electrical service, pipelines, etc. are developed, reclaiming this development to predevelopment habitat quality is many times not fully completed. I would much rather be wrong, and if I am, could you please make public the location/details of a successful reclamation of O&G facilities? Partial restoration has proven to be possible, but takes more than one human generation to bear much fruit. Recently, the state gained more liability of trying to reclaim the facilities of 3000 bankrupt “orphaned” wells from the last major development, (Coal Bed Methane) “where bonds posted by the operators were woefully inadequate to cover the cost of plugging and reclamation.”<sup>8</sup> At the current time,

reclamation is currently proving economically not feasible and compensatory mitigation technically not possible (game farming SG and purchasing conservation credits on private property to mitigate a state owned public resource). Currently there is not much in reality in the reclamation and compensatory mitigation areas to hang your hat on. The EO needs to do more to not develop (avoid) crucial irreplaceable habitat in the first place, such as in the golden triangle, and not rely on the hope that the habitat can be somehow reclaimed or mitigated in the future.

**11. Clarification of Statement in the EO that deems Development Avoids Negative Impact to GSG**

Item #7 p 5 of the EO explicitly states: "Development consistent with the stipulations set forth in Attachment B shall be deemed sufficient to demonstrate that the activity will avoid negative impact to Greater sage-grouse." To declare that negative impacts do not occur by deeming it so does not communicate what is actually happening in reality. This statement is at a minimum misleading to the public and to those who "develop", and in reality is factually and nakedly false. Developers and multiple users of the sage grouse resource take this statement at face value and believe that their use of the resource following core area stipulations has no negative impact to the resource established a false narrative. Could this statement be causing friction between conservationists who recognize resource use even following core stipulations have impacts, and users of the resource who believe that use of the resource incurs no impact? To state that if the core area conservation strategy if followed that negative impacts to GSG will not occur is obviously not accurate. The core area rightly so includes many "de-minimus" uses and recognizes valid existing rights prior to the adoption of core area, core area protections do not include 17% of the GSG population, in non-core areas "There are no limitations to disturbance outside of the 0.25 mile no surface occupancy buffer", you can go on and on describing negative impacts to GSG that will occur by properly following the core area strategy. The core area strategy is based on "Avoidance" and "Minimization" and "when Core Population Area thresholds are exceeded" (due to implied negative impacts in spite of the core area strategy) "compensation" and "mitigation". Item #7 needs to be tempered to recognize that negative impacts will occur when the core area strategy is followed to better communicate the reality of the core area strategy to the public.

**References**

1. Human–Wildlife Interactions 7(2):230–249, Fall 2013 Recommended management strategies to limit anthropogenic noise impacts on greater sage-grouse in Wyoming Gail I. patRiCelli, Department of Evolution and Ecology, University of California, Davis, CA 95616, USA GPatricelli@ucdavis.edu JeSSiCa I. BliCkley, Department of Evolution and Ecology, University of California, Davis, CA 95616, USA StaCie I. hoopeR, Department of Evolution and Ecology, University of California, Davis, CA 95616, USA
2. Experimental Evidence for the Effects of Chronic Anthropogenic Noise on Abundance of Greater Sage-Grouse at Leks

JESSICA L. BLICKLEY,\*† DIANE BLACKWOOD,\*‡ AND GAIL L. PATRICELLI\* \*Department of Evolution and Ecology and Graduate Group in Ecology, 2320 Storer Hall, One Shields Avenue, University of California, Davis, CA 95616, U.S.A. ‡Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute, St. Petersburg, FL, U.S.A.

3. Experimental Chronic Noise Is Related to Elevated Fecal Corticosteroid Metabolites in Lekking Male Greater SageGrouse ( *C e n t r o c e r c u s u r o p h a s i a n u s* )  
Jessica L. Blickley<sup>1</sup>, Karen R. Word<sup>2</sup>, Alan H. Krakauer<sup>1</sup>, Jennifer L. Phillips<sup>1</sup>, Sarah N. Sells<sup>3</sup>, Conor C. Taff<sup>1</sup>, John C. Wingfield<sup>2</sup>, Gail L. Patricelli<sup>1\*</sup>
4. Greater Sage-Grouse Habitat Selection, Survival, and Wind Energy Infrastructure  
CHAD W. LEBEAU,<sup>1</sup> Western EcoSystems Technology, Inc., 200 South 2nd Street, Laramie, WY 82070, USA GREGORY D. JOHNSON, Western EcoSystems Technology, Inc., 415 W. 17th Street, Suite 200, Cheyenne, WY 82001, USA MATTHEW J. HOLLORAN, Wyoming Wildlife Consultants, LLC, P.O. Box 893, Pinedale, WY 82941, USA JEFFREY L. BECK, Department of Ecosystem Science and Management, University of Wyoming, Dept 3354, 1000 East University Avenue, Laramie, WY 82071, USA RYAN M. NIELSON, Western EcoSystems Technology, Inc., 415 W. 17th Street, Suite 200, Cheyenne, WY 82001, USA MANDY E. KAUFFMAN, Western EcoSystems Technology, Inc., 200 South 2nd Street, Laramie, WY 82070, USA ELI J. RODEMAKER, Wyoming Wildlife Consultants, LLC, P.O. Box 893, Pinedale, WY 82941, USA TRENT L. MCDONALD, Western EcoSystems Technology, Inc., 200 South 2nd Street, Laramie, WY 82070, USA
5. Effects of a Wind Energy Development on Greater Sage-Grouse Habitat Selection and Population Demographics in Southeastern Wyoming  
Prepared for National Wind Coordinating Collaborative 1110 Vermont Ave NW, Suite 950 Washington, DC 20005  
Prepared by:  
Chad W. LeBeau<sup>1</sup>, Greg D. Johnson<sup>1</sup>, Matthew J. Holloran<sup>2, 4</sup>, Jeffrey L. Beck<sup>3</sup>, Ryan M. Nielson<sup>1</sup>, Mandy E. Kauffman<sup>1</sup>, Eli J. Rodemaker<sup>2, 5</sup>, and Trent L. McDonald<sup>1</sup>  
<sup>1</sup>Western EcoSystems Technology, Inc., 415 W. 17th St., Cheyenne, WY 82001 <sup>2</sup>Wyoming Wildlife Consultants, LLC, P.O. Box 893, Pinedale, WY 82941 <sup>3</sup>University of Wyoming Department of Ecosystem Science and Management, 1000 East University Ave, Laramie WY 82071 <sup>4</sup>Currently at Operational Conservation, LLC, 1612 Laporte Ave., Fort Collins, CO 80521 <sup>5</sup>Currently at Image Spatial Consulting, LLC, 552 North Cedar Street, Laramie, WY 82072
6. Probability of lek collapse is lower inside sage-grouse Core Areas: Effectiveness of conservation policy for a landscape species  
Emma Suzuki Spence<sup>1</sup> , Jeffrey L. Beck<sup>2</sup> , Andrew J. Gregory<sup>1</sup> \*
- 1 School of Earth Environment and Society, Bowling Green State University, Bowling Green, Ohio, United States of America, 2 Department of Ecosystem Science and Management, University of Wyoming, Laramie, Wyoming, United States of America
7. Raising sage grouse: Rules in development to allow sage grouse breeding  
Written by Saige Albert  
Published: 03 June 2017

*Saige Albert is managing editor of the Wyoming Livestock Roundup*

8. Coalbed Methane: Boom, Bust and Hard Lessons

Dan Bleizeffer

WyoHistory.org

March 29, 2015

9. Rearing captive sage grouse could offset losses, True says

WyoFile

**May 16, 2017 by [Angus M. Thuermer Jr.](#)**

Thank you for the opportunity to comment on the SGEO 2015-4

Sincerely,

Brian Strampe



WGFD HPP <wgfd.hpp@wyo.gov>

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## Sage Grouse Plans

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**Bruce** <english3761@yahoo.com>  
To: wgfd.hpp@wyo.gov

Wed, Apr 3, 2019 at 11:28 AM

Please do not allow an energy company to attempt to captive breed the sage grouse in an obvious effort to dodge the regulations – BOGUS and we all know it!

BPE



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Comments RE: Review and update of Wyoming Executive Order pertaining to Greater Sage-Grouse

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Tim Kalus <tim.kalus@chk.com>  
To: "wgfd.hpp@wyo.gov" <wgfd.hpp@wyo.gov>

Wed, May 1, 2019 at 4:12 PM

Classification: DCL-Internal

Dear Governor Gordon,

Please accept the attached comments in regards to your request for public input pertaining to the update of the Sage-Grouse Executive Order.

Thank you,

**Tim S. Kalus, REM, CNRP**  
*HSE Supervisor – Rockies*

Chesapeake Energy Corporation

1478 Willer Drive

Casper, WY 82604

[tim.kalus@chk.com](mailto:tim.kalus@chk.com)

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State of Wyoming Mail - Comments RE: Review and update of Wyoming Executive Order pertaining to Greater Sage-Grouse

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## DOUGLAS CORE AREA RESTORATION TEAM

May 1, 2019

RE: Review and update of Wyoming Executive Orders pertaining to Greater sage-grouse

Dear Governor Gordon and Sage-Grouse Implementation Team:

The Douglas Core Area (DCA) Restoration Team (RT) is expressing support for maintaining Attachment F of the 2015-4 Sage-Grouse Executive Order as written (i.e. without any substantive modifications), during the review and updating process.

Since 2013, the members of the DCA RT have worked collaboratively to enhance and restore habitat for Greater sage-grouse within the DCA. This multi-stakeholder team consists of representatives from local, state, and federal agencies; non-governmental organizations; industry; and the University of Wyoming, with supporting senior-level specialists from two different consulting firms.

Using Attachment F of the 2015-4 Executive Order as a guide, the DCA RT has designed and implemented six restoration projects in post-wildfire areas within the DCA. The DCA RT was established as a "Technical Team" as described in Attachment F. DCA RT projects have focused on re-establishing sagebrush through sagebrush seedling outplantings, with the greater goal of reducing the wildfire disturbance footprint within the DCA and thus enhancing sagebrush habitat for sage-grouse and other obligate species within it. These wildfire areas where restoration projects have been implemented range in size from several hundred to several thousand acres and are exclusively on land that is privately held. Consistent with Attachment F, the projects are expected to "return as much of the affected burned area back to suitable habitat as quickly as possible", recognizing the environmental challenges, private landowner management objectives, and slow pace of sagebrush habitat restoration.

As a group that has effectively used Attachment F to guide its restoration projects, the DCA RT is expressing support for Attachment F as a flexible and practical guide for groups seeking to restore wildfire areas within sage-grouse core population areas. As indicated in Attachment F, the DCA RT (or Technical Team) is currently collecting data to provide support for "the area[s] returning to functional Greater sage-grouse habitat." Also described in Attachment F, these data are reviewed annually by the DCA RT, so that an upward trend can be determined (if present) after five years.

In summary, Attachment F has served as a guide in the design and implementation of six DCA RT projects, with some projects already in year four of the five years of monitoring necessary for reporting trending data. The guidance in Attachment F is therefore being "field tested" by the DCA RT, and the DCA RT's members have found it to be effective in providing a framework for restoring post-wildfire areas within sage-grouse core population areas. A significant change to Attachment F may require the DCA RT to alter their path/approach to restoration project design and subsequent monitoring that was set in motion more than four years ago. As such, any change to Attachment F could delay the reclassification

of disturbed areas within the DCA that are being actively managed to facilitate their return to functional sage-grouse habitat.

If you have questions, please feel to contact me at 307-234-9045 or [tim.kalus@chk.com](mailto:tim.kalus@chk.com) on behalf on the DCA RT.

Sincerely,



Tim Kalus, on behalf of the Douglas Core Area Restoration Team

Douglas Core Area Restoration Team members include representatives from the organizations listed below. Please note, because some team member organizations are refraining from providing comments, these organizations are not listed below despite their member's active engagement with the team.

Audubon Rockies  
Chesapeake Operating, Inc.  
Converse County Conservation District  
Nature Conservancy  
Thunder Basin Grasslands Prairie Ecosystem Association  
Trihydro Corporation  
University of Wyoming  
U.S. Department of Agriculture – Natural Resources Conservation Service  
Western Ecosystems Technology, Inc.  
Williams  
Wyoming Department of Agriculture  
Wyoming Game and Fish Department



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage Grouse Future

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**Cindy Rose** <crose61514@wyoming.com>

Thu, Apr 4, 2019 at 2:30 PM

To: wgfd.hpp@wyo.gov

Dear Governor Gordon and Others Concerned:

I am not a scientist, a rancher, a hydrocarbon extractor or a hunter. I am a lifelong Wyomingite who is sick to death every time I go out into our beautiful Big Empty and see more and more drilling rigs scattered about the landscape. All oil, gas and coal does not need to be extracted at once. There is a "get it out and get it to market" mentality in the industries and the idea in Wyoming that, if we don't let the companies drill, they will just go elsewhere. I see a drastic way through the crisis of state revenue supply but someone has to have a lot of backbone to implement it.

First, the extractive industries must pay their full royalties. We know they don't, you know they don't and they know they don't. There are millions in unpaid royalties simply because the state doesn't enforce transparency and proper accounting.

Second, everyone must know how much is in the "rainy day account" and where and with whom the funds are invested. This must be done for the sake of absolute transparency. What is the auditor for? Impermanent residents may not give a damn but those of us who have watched this over the last 5 decades dislike the diet of bullshit we have been fed. We have asked and asked and been ignored. We want the truth and we want you to do something about it.

Third, the extractive industries must also be led into the new millennium, by the nose if needs be. For every dollar of profit they gain from doing business here, they will need to spend a dollar developing renewable resources both here and around the world, wherever they do business. By allowing these industries to basically do whatever they want here, **we** are contributing to climate change. Stopping up our ears to what is happening all over the planet will not stop the inevitable damage. The fact that we have had a decades-long debate regarding sage grouse should be a red flag. Giving the industry more and more area to lease and drill in sage grouse habitat brings us closer to not only losing the birds and the landscape they inhabit, but also to that "tipping point" beyond which we might not survive as a species ourselves.

Can we, in short, get by with less leasing and drilling? If we knew what was in the rainy day account, we might. If we collected the royalties due the state, we might. If the extractive industries were made to mitigate at least some of the damage they have and will cause, we might. Please consider that, in your debate, you are contemplating the world's future as well as that of some silly little birds. There really is a lot at stake.

Thank you for your time.

Sincerely,  
Cindy Rose





WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage-Grouse Executive Order Update: Wyoming CLG

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**Cody Doig** <Cody@cebrooks.com>

Wed, May 1, 2019 at 4:36 PM

To: "wgfd.hpp@wyo.gov" &lt;wgfd.hpp@wyo.gov&gt;

Good afternoon.

Please find comments on behalf of the Wyoming Coalition of Local Governments regarding the Sage-Grouse Executive Order update. If you have any questions or concerns, please contact the undersigned directly.

Sincerely,

**Cody B. Doig**

C.E. Brooks & Associates, P.C.

5445 DTC Parkway, Suite 940

Greenwood Village CO 80111

Office: (303) 297-9100

Cell: (970) 309-4210

[www.cebrooks.com](http://www.cebrooks.com)

**050119 SGEO Comment.pdf**

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## COALITION OF LOCAL GOVERNMENTS

925 SAGE AVENUE, SUITE 302

KEMMERER, WY 83101

COUNTY COMMISSIONS AND CONSERVATION DISTRICTS FOR LINCOLN,  
SWEETWATER, UINTA, AND SUBLETTE - WYOMING

May 1, 2019

VIA EMAIL: [wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

Wyoming Game and Fish Department  
5400 Bishop Blvd.  
Cheyenne, WY 82006

Re: Sage-Grouse Executive Order Update

Dear Governor Gordon:

The Coalition of Local Governments (“Coalition”) submits the following comments regarding updates to the 2015-04 Sage-Grouse Executive Order (“EO 2015-04”), the 2017 Executive Order on Wetlands and Riparian Habitat (“EO 2017-02”), and the 2018 Executive Order on Compensatory Mitigation Credit Provider Approval Process (“EO 2018-03”) (*collectively* “SGEOs”).

The Coalition has worked directly with the Bureau of Land Management (“BLM”) and the U.S. Forest Service (“USFS”) on evaluating land use and resource management plans for the conservation of sage-grouse since 2008. The Coalition has endeavored under two presidents, six different Secretaries of the Department of the Interior, and three different Secretaries of the Department of Agriculture to develop defensible and durable sage-grouse management plans that protect the custom and culture of Wyoming while also protecting sage-grouse. The Coalition has closely reviewed state plans in Wyoming, Colorado, and Utah and is still litigating federal plans in Wyoming and Utah as well as working with Moffat County in Colorado. The Coalition is also familiar with BLM and USFS plans in Nevada, Idaho and Oregon by working with energy developers and state and local governments in those states. The Coalition appreciates the opportunity to comment on updating the SGEOs given this extensive background in sage-grouse conservation across the interior west.

### **I. Statement of Interest**

The Coalition is a voluntary association of local governments organized under the laws of the State of Wyoming to educate, guide, and develop public land policy in the affected counties. The

Coalition provides the technical guidance for local governments in writing comments and identifying issues. Coalition members include Lincoln County, Sweetwater County, Uinta County, Sublette County, Lincoln County Conservation District, Sweetwater Conservation District, Uinta County Conservation District, Sublette County Conservation District, and Little Snake River Conservation District. The Coalition serves many purposes for its members, including the promotion of policies and land and water management that protect vested rights of individuals and industries dependent on utilizing and conserving existing water resources and public lands, promotes and supports habitat improvement, supports and funds scientific studies addressing federal land use plans and projects, and providing comments on behalf of members for the educational benefit of those proposing federal land use plans and land use projects.

Both county and conservation district members of the Coalition have authority to protect the public health and welfare of Wyoming citizens while promoting and protecting public lands and water resources. Wyo. Stat. §18-5-208; Wyo. Stat. §§11-16-103, 11-16-122. Conservation Districts have statutory authority to develop and implement comprehensive resource use and management plans for range improvement and stabilization, conservation of soil, water and vegetative resources. Wyo. Stat. § 11-16-122(xvi). The Conservation Districts' jurisdiction includes matters pertaining to the acquisition, construction, operation or administration of any land utilization, soil conservation, erosion control, erosion prevention, flood prevention projects, conservation of water, water utilization, disposal of water in watershed areas and other water projects. *Id.* at (xix).

By statute, boards of county commissioners “shall be deemed to have special expertise on all subject matters for which it has statutory responsibility, including but not limited to, *all* subject matters *directly or indirectly related to the health, safety, welfare, custom, culture and socio-economic viability of a county.*” Wyo. Stat. Ann. § 18-5-208 (emphasis added). As such, each county “may regulate and restrict . . . the use, condition of use or occupancy of lands for residence, recreation, agriculture, industry, commerce, public use and other purposes in the unincorporated area of the county.” *Id.* at §201.

## **II. Cooperation and Coordination with Local Governments Substantially Absent from SGEOs**

### *A. Actual Language of Executive Order*

Currently, EO 2015-04 provides that “state and federal agencies, . . . and other stakeholders shall work collaboratively to ensure uniform and consistent application of this Executive Order to maintain and enhance Greater sage-grouse habitats and populations.” EO2015-04 at ¶14. The EO goes on to state that the state “shall work collaboratively with all appropriate stakeholders...” *Id.* at ¶15. Local Working Groups “will continue to be engaged.” *Id.* at ¶17. Adaptive management strategies will “involve” state and federal agencies. *Id.* at 18. Data regarding the “condition of each Core Population Area” will be gathered from all stakeholders including county governments. *Id.* at 20.

Nowhere in the actual body of EO2015-04 does the language reference any direct coordination with Counties or Conservation Districts *despite* the fact that both of those local governments have had significant input on sage-grouse planning on federal lands with federal agencies. Moreover, it is the Counties and Conservation Districts that work with private landowners, energy companies, and other stakeholders *on the ground* to manage sage-grouse on private and public lands. Thus as a matter of increasing the benefits to the sage-grouse, it makes no sense to exclude (tacitly or otherwise) the parties that are directly involved with sage-grouse management.

Moreover, these local governments are directly impacted by projects on private and federal lands that produce taxable income to the Counties. Thus the SGEOs should not exclude counties – any county – by limiting input through the SGIT county representative. Every county, regardless of its inclusion or exclusion from SGIT, has statutory duties under Wyoming law and the SGEO must include a mechanism to allow *all affected counties* a more direct role in forming sage-grouse policy.

*B. Attachment B: Permitting Process Must Include Local Government Participation*

Attachment B sets out the point of contact for project proponents when state permits are, and aren't, required. When state permits are not required, Attachment B provides that the project proponent and the federal agency “will determine the best process for completing the DDCT and receiving recommendations from the [Wyoming Game and Fish Department].” Notably, local governments *with land use planning authority* are not included in this process and the Coalition notes that this is a systemic problem that results in projects within county boundaries that conflict with county plans and do not put the custom, culture, and best interest of county constituents on equal footing with the interest of the WGFD or the conservation of sage-grouse. The following areas are discrete examples of how the SGEO operates to the disadvantage of local governments:

- When determining if there are ways to avoid or minimize impacts from a proposed project so as to prevent the project from exceeding EO thresholds, Attachment B makes no mention of working with county commissioners, conservation district staff, or any other local government personnel. Attachment B *doesn't even create the opportunity* for a local government to participate. Thus, once again, the EO operates as a structural impediment to the effective participation and management of sage-grouse by locally affected governments. *See* Attach. B at pp. 4.
- According to the SGEO, in determining how to avoid or minimize impacts to sage-grouse habitat, the proponent and permitting agency “will evaluate the DDCT area and the affected Greater sage-grouse core population area for areas where additional reclamation/restoration actions . . . could reduce the amount of overall disturbance.” *Id.* The DDCT area and the Core Population Area are not coextensive with county boundaries. Thus, the “additional reclamation/restoration” actions would actually be

exported to a potentially different county *without ever having consulted either the county of the project or the county of the reclamation*. See *Supra*, \*\*\*. This is a simple fix and works only to balance an improperly structured coordination system in the SGEO.

- The SGEO delegates to the WGFD the duty of “locat[ing] new collector or arterial roads that will have relatively high levels of activity” within certain distances of sage-grouse leks. Attach. B at pp. 7. The WGFD *has no jurisdiction* over transportation elements on federal lands or within county boundaries. The Counties maintain detailed transportation layers including historic information as to how particular routes have been used *prior to the enactment of FLPMA* for livestock grazing, trailing, recreation, and now, energy development. Moreover, Counties have transportation and travel management planning authority under Wyoming law. Thus, it is essential to have local governments participate in developing transportation layers with the proponent and the permitting agency.
- The SGEO designates a 2-mile wide transmission line corridor. Any transmission line *outside* of this corridor will only be approved by the State if it will avoid impacts to sage-grouse. Attach. B at pp. 8. On multiple occasions, the Coalition has worked with landowners frustrated by the BLM’s insistence that transmission lines fit within the State’s corridor *despite* local knowledge of better routes that won’t impact sage-grouse *and* won’t impact private lands. The SGEO should be corrected to require more flexibility for route finding when the 2 mile corridor may result in significant impacts to landowners.

### III. Compensatory Mitigation Framework

#### A. Framework Forces Conflict of Federal and State Law

According to the BLM’s Wyoming 2019 sage-grouse plan, the BLM will, among other things, “[i]ncorporate state required or recommended mitigation into the BLM’s NEPA decision-making process, if the WGFD determines that compensatory mitigation is required to address impacts to GRS habitat as a part of State policy or authorization, or if a proponent voluntarily offers mitigation.” 2019 Plan at A-8. The BLM adopted the State’s compensatory mitigation framework “to the extent consistent with federal law, regulations, and policy.” *Id.* at A-7.

As it stands, the State’s compensatory mitigation framework is at best, ambiguous, and at worst completely contrary to federal land use management standards and case law. The July 10, 2017 Mitigation Framework quotes the BLM’s 2015 sage-grouse plan which describe EO 2015-04 as including a “net conservation gain” standard. See July 10, 2017 Framework at 1. In EO 2018-03, it appears as though the State will “require[] mitigation to benefit the species...;). EO 2018-03 at 1. Thus, it appears that the BLM understands the State’s mitigation framework as requiring mitigation

that “improves” or benefits the species and there is language in the Framework to support that interpretation.

The State *should not* require what the BLM may not deliver. The Property Clause of the U.S. Constitution gives Congress the right “to control their occupancy and use, to protect them from trespass and injury, and to prescribe the conditions upon which others may obtain rights in them . . .” *Utah Power & Light Co. v. United States*, 243 U.S. 389, 405 (1917); *see also Kleppe v. New Mexico*, 426 U.S. 529, 539 (1976). And, when Congress exercises its authority vested by the Property Clause, federal law preempts conflicting state laws pursuant to the Supremacy Clause of the U.S. Constitution. Article VI, Clause 2. Put simply, federal land use standards dictate federal land mitigation and the State should not manufacture a conflict by *requiring* project proponents to improve sage-grouse habitat or improve sage-grouse numbers beyond the BLM or USFS statutory responsibility. The BLM may attempt to be consistent with the State’s framework, but the BLM may not contract the scope of federal law to match a State program. 43 U.S.C. §1712(c)(9); *see also Granite Rock v. Calif. Coastal Comm’n*, 480 U.S. 572, 578 (1987) (holding that a state program cannot supersede or interfere with mineral development on federal land).

Thus, rather than using a mitigation standard that the BLM is prevented from using, the State should revise the text to eliminate the words “gain” or “benefit” from the SGEOs or, in the alternative, explicitly recognize that federal land use standards will dictate the level of mitigation on federal lands. The state has primacy over wildlife but the WGFD *does not have* federal land use planning authority and *neither does it have* the multiple use mission of the BLM.

#### *B. Framework Artificially Exports Mitigation to Counties Without Impacts*

As written, the Framework does not articulate how the State will prevent all, or most, of the mitigation for a project from being completed in a County that does not also have the impact created by a project. There is no language that details this possibility, and there is no assurance given by the State that mitigation will occur within certain proximity to the impact.

In large part, these parameters have already been established and the SEGEOs should clarify the parameters used by federal courts. When conditioning approval of a permit upon mitigating impacts of a proposed development, the BLM must comply with the unconstitutional conditions doctrine. *Koontz v. St. Johns River Water Mgmt. Dist.*, 133 S. Ct. 2586, 2595 (2013). Under this doctrine, the BLM “may not leverage its legitimate interest in mitigation to pursue governmental ends that lack an *essential nexus and rough proportionality* to those impacts.” *Id.* (Emphasis added). Conditioning permit approval includes two steps. *Id.*; *see also Dolan v. City of Tigard*, 512 U.S. 374, 387-88 (1994). First, the BLM cannot rely on attenuated relationships and gimmickry to claim a nexus between a proposed project and the environmental effects to be mitigated. *Dolan*, 512 U.S. at 387. Second, the BLM must make “individualized determinations” that the on-the-ground efforts are related in “both nature and extent to the impact of the proposed development.” *Id.* at 389. The Supreme Court has held that any condition must be roughly proportionate to the nature and extent

May 1, 2019  
Page 6

of development impacts. *Dolan*, 512 U.S. at 392; *Koontz v. St. Johns River Water Mgmt. Dist.*, 133 S. Ct. at 2595 (affirming need to justify condition on nexus and rough proportionality).

The State's framework, therefore, cannot simply demand that compensation on federal lands at any location according to any standard chosen by the State. It is the Coalition's position that removing mitigation beyond the boundaries of the County would violate the essential nexus of mitigation to the impact.

#### **IV. Update Must Consider Monitoring Data of What Has, and Has Not, Worked Since 2008**

The Coalition appreciates the opportunity to comment on relevant updates to the SGEOs and also appreciates that the State has attempted to streamline the process by which changes are made to the controlling document. The Coalition, however, believes that a larger and more comprehensive review of sage-grouse management in Wyoming is necessary.

Wyoming identified the first iteration of sage-grouse core habitat 12 years ago and management of the bird has evolved around substantially similar prescriptions since that time. It is also clear that sage-grouse numbers have improved, awareness has increased, and the population is no longer threatened. By all accounts, the sage-grouse has improved and stabilized.

The Coalition believes, therefore, that the focus of the evaluation should shift from maintaining or increasing prescriptions to a focused and data based review of what prescriptions *are not producing benefits* to the bird despite the fact that anthropogenic uses have been severely impacted. For example, the science surrounding noise impacts to leks is extremely controversial and the subject of federal litigation and yet the State has not reviewed the validity of the values used in the SGEOs. Similar problems also affect the DDCT disturbance thresholds and, again, there has not been an effort to determine whether those parameters should be adjusted.

At a minimum, the Coalition requests that the State issue direction to initiate a review of all data available – specific to Wyoming – that proves or dispels the prescriptions currently implemented in the SGEO.

Sincerely,

/s/ Kent Connelly  
Kent Connelly, Chairman  
Coalition of Local Governments



WGFD HPP <wgfd.hpp@wyo.gov>

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## Keep the ball rolling

---

**Bear Arms** <dennis.buchanan@gmail.com>  
To: wgfd.hpp@wyo.gov

Sat, Apr 13, 2019 at 9:19 PM

Stay with the plan.



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage grouse program

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**Donna Kassel** <d.kassel2015@gmail.com>

Fri, Apr 12, 2019 at 11:39 PM

To: wgfd.hpp@wyo.gov

Dear Gov. Gordon,

When I first moved to Wyoming some 44 years ago, I fell in love with the land and the people. The prairie was a wondrous expanse and so different than the land of my origin. I never tired of the openness, the vast views and the many creatures that inhabited it. Although city dwellers our family spent much time in the wild areas near us and I have fond memories of unforgettable encounters with many forms of wildlife. I didn't know much about conservation then and unfortunately still don't know enough.

Years later, having raised my family but now being alone, I wanted to enjoy the beauty of Wyoming in the company of others and to have the ability to engage with nature. I joined the Audubon Society and learned about the plight of birds here in Wyoming and of course the successful conservation of the sage grouse through the cooperation of the government, the citizenry, and business interest. I was very impressed and proud of the success of the program and proud of Wyoming. Wasn't this the way a program should work? No one coerced, everyone looking for the good for all involved including the land and its wild inhabitants.

In 44 years I have seen many changes. Not all of them beneficial to the beauty of our earthly home. I have to venture further and further from my house to see the same prairie that use to be visible from my porch. Now, I understand that the sage grouse program is under scrutiny and slated for change. It makes me very sad. Trying to change it reminds me of the old adage, "If it ain't broke, don't fix it." Please do what you can to preserve our program on the sage grouse as it stands so that it can continue to be an outstanding example of what people can do when working together to preserve our environment. Wyoming's and the country's future depends on it.

Donna Kassel  
1403 Paintbrush  
Cheyenne, Wyoming



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

## Cooper Comments for Governor Gordon on the SGEO

barbedwire &lt;barbedwire@hughes.net&gt;

Sat, Feb 23, 2019 at 3:36 PM

To: Wgfd.hpp@wyo.gov

A few years ago, I was in Washington, DC. for a meeting and I noticed a memorial a short distance from my hotel. When I had some spare time I went across the street and discovered that it was a memorial to the Japanese-Americans imprisoned by the United States Government during World War II. In a polished circle of stone stood a bronze sculpture of two herons entangled in barbwire. On a curving stone wall was carved the words: Heart Mountain, 10,767, Wyoming. Heart Mountain is the place. The number was the number of the people, mostly citizens, who were imprisoned unconstitutionally. Wyoming is where it happened. Witnessing this was the one time I have ever been ashamed to be from Wyoming.

I mention this because there are many parallels between what happened at Heart Mountain and what is happening here. President Franklin D. Roosevelt imprisoned the Japanese-Americans by the use of an executive order. The Roosevelt executive order was quite popular and great harm was done to the Japanese-Americans. These people lost their farms, businesses, and their homes- and were taken far from where they lived and placed in a concentration camp where they had no employment. Before the end of the war, the executive order was ruled to be unconstitutional by the United States Supreme Court. Saving the sage grouse and avoiding the bird being listed under the ESA is also a popular cause. Here the civil rights of landowners are being ignored. **Article I, Section 7 of the Wyoming Constitution states: Absolute, Arbitrary power over the lives, liberty, and property of freemen exists nowhere in a republic, not even in the largest majority.** This means that no matter how popular a cause it is to save sage grouse, even then my civil rights shall not be violated. It also means that for the Governor to exercise power that it must be founded in the Constitution and provided by state law. His power is not arbitrary. He has no universal power to condemn property, or regulate land use. He cannot make new laws on his own order. This Article of the Wyoming Constitution comes directly from the writings of John Locke. To govern without settled standing law is Locke's definition for arbitrary power. I have asked numerous times at SGIT meetings where the statutory authority exists for the Governor force private land into core areas. No matter how many times I have asked the Governor's office or SGIT, no statutory authority has ever been revealed. According to the Wyoming Constitution the Governor shall take care to faithfully execute the **laws**. There is no law that allows the state to force private land into core sage grouse areas therefore any mention of private property as being part of a core area or any restrictions on the use of private property should be removed from the Sage Grouse Executive Order.

I own my private land in the same way that you own your personal bank accounts. I doubt any of you would tolerate the Governor telling you how to spend your own money. How is it that the Governor gets to make a similar decision about what I own? I have the right to utilize all the potential value and income that my land can generate -not just the grazing. Remember that the Governor has placed thousands of acres of my land in the core as well as most of my minerals. All this was done without notice to me or any due process of law. Placing private property into a core area restricts the use of that property. If placing private land into the core did not somehow restrict the use of the property then it would serve no purpose to place it within the core boundary. It makes little sense to argue that the executive order has no teeth so therefore we must force private land into core areas. I only want to maintain my primacy in deciding what activities take place on my private land. Before my land was placed in the core, I was able to negotiate with oil companies the location of wells, what time of year that drilling would occur, and where access roads would be built. After my land was placed in the core, the BLM was empowered to dictate everything about how, where, and when the well was drilled. The decisions made by the BLM greatly increased the damage to my property. The BLM went even further to demand that wildlife studies be done miles from the proposed wellhead. When I objected, the BLM threatened to deny the oil company permits to drill. On private land outside the core, no such demands were made to drill an oil well.

I believe the entire sage grouse conservation plan was designed specifically to avoid comment periods, notice provisions and public debate. The normal process where laws are passed and then regulations are developed to implement a law has been bypassed. If any single agency of Wyoming government tried to follow this hurried timeline and bizarre process they would find themselves violating the Wyoming Administrative Procedures Act. SGIT is now established under state law, yet SGIT does not have to follow the APA. Here you combine multiple agencies and you allow them to meet outside of their normal regulatory scope and bypass all protections for citizens. There is no right to appeal any decisions made for sage grouse. Cooperating Federal agencies are now given a lever to decide how my private land will be used. The members of SGIT that are supposed to represent landowners have been nearly silent. The landowner representatives neither distribute information to landowner organizations- nor do they solicit comments from individual landowners. It is unfortunate that the Governor will make his decisions without having to face a single citizen or hear a word of discussion. The Sage Grouse Executive Order needs to be directed to the proper agencies of state that the Governor has authority over. Federal and private lands should be removed from the SGEO.

Every landowner who has land within the core should be contacted and asked for their consent. Those that give consent should be compensated. Forcing private land into core areas, while expedient, gains very little because without the cooperation of those living closest to the grouse, you will ultimately fail to protect them. Creating economic ghettos where no energy development is allowed will push landowners toward real estate development when grazing cannot sustain a ranch. The core area strategy cannot stop real estate development in the core.

I am simply asking that the Governor comply with the Wyoming Constitution and remove all private land from Sage Grouse Core Areas. I am willing at any time to participate in a legislative effort to address these issues. I am not willing to submit to the arbitrary edicts of a Governor acting beyond the rule of law.

Doug Cooper

7L Livestock Co.

Pioneer Agricultural Enterprises



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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**protecting four corners state lek 4779 sec 16 in Johnson County**

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**Elizabeth Falxa** <bfalxa@comcast.net>

Wed, Apr 3, 2019 at 4:02 PM

To: wgfd.hpp@wyo.gov

Dear Governor Gordon,

On our Falxa Land Company ranch in Johnson County we lease state section 4779 Sec 16.

There is a vibrant lek with 30 males displaying there in 2018.

It is Four Corners State lek in 4779 sec 16 near Iragaray Road 45 miles south east of Buffalo.

Iragaray Road travels east off of Trabing Road from Interstate 25.

The Core Boundary goes around the west and north side of the State Section16 and excludes the entire State section from the Core Area.Please redraw the Core Boundary to include this active site for at least 60 total (30 males & 30 females).

Thank you,

Betty Falxa

Falxa Land Company, Inc

[bfalxa@comcast.net](mailto:bfalxa@comcast.net)

(617) 699-3535



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage Grouse Executive Order - comment

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**Eric Dalton** <daltonericm@gmail.com>

Thu, Apr 4, 2019 at 6:55 PM

To: wgfd.hpp@wyo.gov

Dear Governor Gordon and WG&FD staff,

Governor Mead's version of the Sage Grouse Executive Order is largely sufficient. First and foremost, Greater Sage Grouse conservation should be informed by science rather than expediency. Oil and gas drillers are increasingly able to rely on horizontal drilling to increase their setbacks from leks and other critical habitat.

Aside from new technology, another change since 2015 is the federal government reneging on previous commitments to protect grouse. Wyoming has the world's largest population of both sage grouse as well as pronghorn. Our sage habitat is unique, and sage grouse are enablers to protect this ecosystem.

Another aspect is a holistic habitat evaluation to consider other species such as pronghorn and mule deer and especially their migration corridors threatened by expanded leasing. Our knowledge of multi-species habitat connectivity has improved since 2015.

Specifically consider:

- Adding another WHEREAS statement along the lines of...

WHEREAS, protecting the sagebrush-steppe habitat type for Greater sage-grouse also protects the habitat of numerous other flora and fauna to include game species such as the pronghorn and mule deer along with their migration corridors

Sincerely, Eric Dalton

Cheyenne

[daltonericm@gmail.com](mailto:daltonericm@gmail.com)



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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**Public Comment on WY GRSG Executive Order 2015-4 attached**

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**Gwyn McKee** <g\_mckee@vcn.com>

Wed, May 1, 2019 at 7:21 PM

To: wgfd.hpp@wyo.gov

Per Governor Gordon's request, please find attached my proposed items for consideration during the upcoming review and possible revision of the current Wyoming Executive Order 2015-4 regarding Greater Sage-grouse.

I greatly appreciate the opportunity to participate in this review process.

Respectfully,

Gwyn

Gwyn McKee

President/Principal Biologist

Great Plains Wildlife Consulting, Inc.

[70 Upper Prairie Dog Rd](#)

[Banner, WY 82832-9733](#)

(307) 674-1742 (office)

(307) 689-5571 (mobile)

[g\\_mckee@vcn.com](mailto:g_mckee@vcn.com)



**EO 2015-4 Public Review\_GPWC\_1May2019.pdf**  
1024K

# Great Plains Wildlife Consulting, Inc.

70 Upper Prairie Dog Rd • Banner, Wyoming 82832-9733  
Phone (307) 674-1742 • Cell (307) 689-5571 • E-mail: g\_mckee@vcn.com

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May 1, 2019

The Honorable Governor Mark Gordon  
State Capitol Building, Room 124  
200 W/ 24<sup>th</sup> Street  
Cheyenne, WY 82002

RE: Public Comment on Wyoming's Greater Sage-grouse Executive Order 2015-4

Dear Governor Gordon,

As requested, please find attached some suggestions for potential opportunities for clarification in the State of Wyoming's Executive Order (EO) 2015-4 regarding Greater Sage-grouse Core Area Protection. As we all know, Wyoming has firmly established itself as a conservation leader for sage-grouse and their habitats, and your efforts to invite and consider public input as you prepare a revised EO for this species demonstrate your commitment to continued leadership in sage-grouse conservation while recognizing the value of other land uses.

I have provided a summary of items for your review and consideration in the following pages. Please keep in mind that, with few exceptions, the projects with which I am most familiar occur in Non-Core Population Areas. So I offer these thoughts as if I were a first-time user trying to understand the processes and stipulations outlined in EO 2015-4.

Thank you again for providing this opportunity to offer my thoughts on Wyoming's outstanding approach to both sage-grouse conservation and responsible resource development.

Respectfully,

A handwritten signature in black ink, appearing to read 'Gwyn McKee', written in a cursive style.

Gwyn McKee  
President/Principal Biologist

**Executive Order (EO) Page 1, Whereas #6**

In light of recent changes in the listing status of the Greater Sage-grouse (hereafter, sage-grouse) relative to the Endangered Species Act, and of the upcoming review of the 2015 listing determination next year, I wonder if it might be beneficial to find a more general way to address the historic/current/future listing status at the Federal level in this introductory section of the revised EO?

**Executive Order (EO) Page 4, Item #2**

The EO states that *“Activities existing or permitted in Core Population Areas prior to August 1, 2008, will not be required to be managed under Core Population Area Stipulations.”*

In the second paragraph of a letter sent to the Wyoming Mining Association, dated June 12, 2017 (attached for your convenience), the Wyoming Department of Environmental Quality (WDEQ) and the Wyoming Game and Fish Department (WGFD) indicated that they *“are in agreement that the area inside of the (coal) mine permit boundaries as of October 2, 2015...represents areas of non-core sage-grouse habitat as defined in the SGEO and are therefore excluded from required mitigation stipulations.”* That letter goes on to reference other components of surface coal mines relative to the sage-grouse EO 2015-4.

\*Please consider clarifying the current threshold date (e.g., August 1, 2008; October 2, 2015) for which “valid and existing rights under the EO” are defined, particularly if that date might vary by industry or activity (ranching, etc.) throughout the state.

**EO Page 6, Item #21**

Please consider clarifying in any pending new EOs whether the current 7-year period (initiated July 29, 2015 under EO 2015-4) for current delineations for Core Population Areas, Connectivity Areas, Winter Concentration Areas and protective stipulations will remain in place (i.e., up for review in 2022) or will be “reset to zero” upon signing of a new EO in 2019 (i.e., extending the next delineation review period to 2026).

**EO Attachment B, Page 6, Seasonal Use**

**Core vs. Non-Core Population Areas:**

For Non-Core Population Areas, the EO states that “a 2-mile seasonal buffer from March 15 to June 30 applies to occupied leks...” where appropriate sage-grouse habitat is present.

1. Please consider providing the same type of identified outer boundary and timing period for seasonal buffers around occupied leks in Core Areas; no such boundary is identified for Core Area leks in EO 2015-4 under this subsection.

For example, is the intent that a 4-mile seasonal buffer from March 15 to June 30 applies to occupied leks in Core Areas where appropriate sage-grouse habitat is present?

2. Please consider clarifying whether or not the seasonal buffer is measured from the outer edge of the corresponding NSO perimeter (presumed) for an occupied lek.
3. Please consider clarifying throughout the EO that seasonal buffer timings extend “through” a given date vs. “to” that date. For example, seasonal buffers would apply from March 15 through June 30, and activities would be allowed from July 1 through March 14. I do understand that this is not a huge hindrance to effectively implementing the EO, but more clarity is usually a good thing, especially for first-time users.

#### **EO Attachment B, Page 8, Noise**

Please consider clarifying whether or not limitations regarding new project noise levels are intended to be applied equally in both Core and Non-core Population Areas.

#### **EO Attachment B, Page 8, Vegetation Removal**

1. Please consider clarifying whether or not the 4-mile buffer around an occupied lek relative to initial vegetation removal is intended to apply in both Core and Non-Core Population Areas. This would include clarification as to whether or not a 2-mile buffer would be applied in Non-Core Areas.
2. Should sentence #3 in this subsection read as follows (red font)? *“Production and maintenance activities (surface mining) ~~outside~~ within seasonal stipulations are considered permissible once the vegetation is removed outside the seasonal stipulations.”*

It appears that the intent of this statement is for initial topsoil stripping activities to honor current spatial and timing limitations for occupied leks but, once that disturbance has occurred, no further restrictions will apply to any subsequent production or maintenance activities related to surface mining as long as they are located outside the NSO buffer. Is this interpretation correct?

#### **EO Attachment B, Page 13, Coal Mine Operations**

Please consider providing more clarity in this section. Respectfully, the current text regarding surface coal mines has resulted in considerable confusion among coal operators in recent years.

What was the intent of including the following coal language under “Specific Stipulations” in Attachment B of EO 2015-4?

*“Coal mining operations will be allowed to continue under the regulatory and permit-specific terms and conditions authorized under the... (WEQA) and the... (SMCRA) as administered by the Wyoming Department of Environmental Quality (WDEQ)”*

iv. *“The USFWS has agreed that SMCRA is an adequate regulatory mechanism to protect Greater sage-grouse.... Permitting under the WEQA is required to be equally or more stringent than SMCRA...”*

- a. These excerpts seem to acknowledge that current stringent coal permitting and reclamation requirements under SMCRA and WDEQ are sufficient on their own to address potential impacts to sage-grouse and grouse habitat (including leks in both Core and Non-Core Population Areas, presumably), without applying additional stipulations outlined in the current EO, as long as state permitting requirements are at least as stringent as those under SMCRA.
- b. Also, subsections i-iii under this coal text all refer specifically to Core Population Areas, which further supports the idea that coal impacts in Non-core Areas are adequately addressed under SMCRA, exempting them from all EO stipulations.

Subsection ii specifically states that *“Incorporation of new leases into existing mining operations is considered allowable by the State without further regulatory obligations under the Greater sage-grouse Core Area Protection strategy (underline added), beyond the current requirements under the WEQA and SMCRA.”*

Again, this seems to imply that current permitting requirements for Wyoming surface coal mines are sufficient and, therefore, such coal mining is exempt from all EO stipulations (even in Core Population Areas). However, the above EO excerpt regarding new leases also seems to be in conflict with guidance provided to surface coal mines by the WDEQ and WGFD in the letter of June 2017, which states in paragraph two that *“A reassessment would be triggered in the event of a new permit, or if an operations permit area boundary were to be modified (e.g., increased in area) resulting from a mine plan change, or if there were an addition/amendment of new lands.”*

- c. Please also provide some clarity as to how the coal-related subsections of EO 2015-4 would *“be applied in addition to general stipulations”* (as stated in the parenthetical text under the *“Specific Stipulations”* subheading on Page 12) when the coal-specific text: 1) seems to override all EO stipulations; and 2) does not identify any specific coal-related stipulations to add to general stipulations.

### **EO Attachment F, Page 2, Unsuitable Habitat**

Please consider clarifying and/or expanding the definition of “unsuitable” sage-grouse habitat per recent literature. For example, both slope and terrain roughness (ruggedness or

irregularity) have been shown to have a negative effect (i.e., avoidance) on habitat selection by sage-grouse in all seasons, even when sagebrush is present (Baxter et al. 2017, Walker et al. 2016, Coates et al. 2014, Caudill et al. 2013, Dzialak et al. 2011 and 2012, Bruce et al. 2011, Doherty et al. 2008, Bunnell et al. 2004). Although the current language in the EO does reference “canyons” as unsuitable sage-grouse habitat, it would be helpful to have more clear definitions based on current peer-reviewed literature.

#### **EO Attachment H, Page 1, Compensatory Mitigation**

The first sentence in the last paragraph in this section specifically identifies compensatory mitigation “*as a strategy that should be used when avoidance and minimization are inadequate to protect Core Population Area Greater sage-grouse.*” This language implies that compensatory mitigation is not required in Non-core Population Areas, yet the Compensatory Mitigation Framework itself indicates that such actions also are applied in Non-core Population Areas.

Please consider clarifying in the EO that compensatory mitigation applies in both Core and Non-core Population Areas in Wyoming, though at different levels.

#### **Citations**

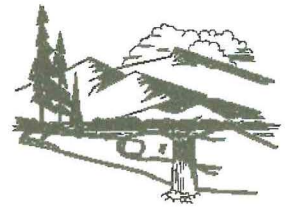
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# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

June 12, 2017

Wyoming Mining Association  
Mr. Travis Deti, Executive Director  
1401 Airport Parkway, Suite 230  
Cheyenne, WY 82001

RE: Application of the Governor's Executive Order relating to Sage Grouse

Dear Mr. Deti,

This letter is in response to recent questions the Wyoming Department of Environmental Quality (WDEQ) and the Wyoming Game and Fish Department (WG&FD) have received relating to the Governor's Executive Order (SGEO) on sage-grouse. The WDEQ and WG&FD offer the following clarifications on this matter.

The WDEQ and WG&FD are in agreement that the area inside of the mine permit boundaries as of October 2, 2015, (when the United States Fish and Wildlife Service (USFWS) made its "not warranted" decision and sage-grouse were no longer considered a candidate species) represent areas of non-core sage-grouse habitat as defined in the SGEO and are therefore excluded from required mitigation stipulations. These areas are not subject to additional stipulations for development or mitigation requirements because they have valid and existing rights under the SGEO and were assessed under the Surface Mine Control and Reclamation Act while the sage-grouse were a candidate species. A reassessment would be triggered in the event of a new permit, or if an operations permit area boundary were to be modified (e.g. increased in area) resulting from a mine plan change, or if there were an addition/amendment of new lands. To provide clarity, the WDEQ and WG&FD determination of eligible lands subject to the SGEO has not changed and is not being considered for further review as the result of recent Bureau of Land Management (BLM) lease readjustments in 2018 and 2019. The WDEQ and WG&FD have met to discuss recent correspondence between the agencies and agree that because of staff turnover, some of the base agreements and fundamental knowledge of this subject have not been adequately distributed between new technical staff members. WDEQ and the WG&FD are currently rectifying this issue and concern by providing training and ensuring information transfer on this topic.

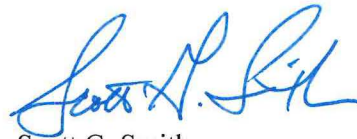
WDEQ and the WG&FD have also reviewed recent correspondence from the United States Forest Service (USFS) relating to sage-grouse; specifically, review of the Bureau of Land Management (BLM) coal lease reevaluations within the Powder River Basin (PRB). It is the understanding of the WDEQ and WG&FD that the leases in question have a 20 year BLM renewal requirement and therefore are open for review at this time by the BLM. The USFS is a cooperating agency with the BLM in matters such as this that pertain to the Thunder Basin National Grasslands. In reviewing the information provided by the USFS, it is clear that the lease units referenced have been mined through and are either currently disturbed or undergoing permanent reclamation. It is the opinion of the WDEQ and WG&FD that any potential new lease stipulations need to be consistent with the SGEO and would only apply if the permit boundaries would expand beyond what existed on October 2, 2015.

If you have further questions on this matter, please contact the LQD Administrator at 307-777-7046 or the WG&FD Deputy Director 307-777-4501.

Sincerely,

A handwritten signature in blue ink, appearing to read 'K. Wendtland', with a long horizontal flourish extending to the right.

Kyle J. Wendtland  
Administrator, Land Quality Division

A handwritten signature in blue ink, appearing to read 'Scott G. Smith', with a long horizontal flourish extending to the right.

Scott G. Smith  
Deputy Director, WG&FD

cc: Todd Parfitt, Director WDEQ  
Mike McGrady, Office of Governor Mead  
Jessica Crowder, Office of Governor Mead  
Bod Budd, WWNRT  
Amanda Withroder, WG&FD



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage Grouse

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**Greg Ressler** <grressler@yahoo.com>

Wed, Apr 3, 2019 at 1:17 PM

To: "wgfd.hpp@wyo.gov" &lt;wgfd.hpp@wyo.gov&gt;

Cc: "Representative - Haley, Bill" &lt;Bill.Haley@wyoleg.gov&gt;

My personal belief, strong in fact, for the recent years' decline of the sage grouse in WY has far more to do with habitat change than gas/oil exploration or production. When I was a teenager in the late 70's/early 80's, we often hunted plentiful birds in sage draws on BLM ground on Shirley Basin. Some of those places had sage brush well over knee-high. In most of those exact same places today, the brush is sparse and well below knee high and often non-existent. I have seen and can probably produce old polaroid pictures of us boys happily posing with our limit of sage grouse standing in dense brush. Those exact locations today have very little brush as evidenced by my many trips between Laramie and Casper working, hunting, fishing, and seeing family over the years. I'm not a game biologist, but it's not hard to see that sage grouse here today would have little protection from weather, foot predators, and birds of prey. Things change. Of course I don't see the numbers of grouse today that I once did, but I do see grouse every year in different areas on hunting adventures...maybe some of these areas had very little brush back then but now have more sage brush today?; maybe enough to support some grouse? I'm not sure, just sayin...

Furthermore, I'm not a 'climate change' expert either, but know through education (and the fossil house near Medicine Bow), that this area was once very warm and had the vegetation to support dinosaurs. To the extreme, I've been also been told that a vast part of this planet, including this area, was once in an ice age too. Hmm. The climate and habitat have both changed over time regardless of human involvement. Go figure. I'm not saying that humanity has no involvement with climate change in today's 'age', I'm only saying that over the last 35 years, I have never seen an oil derrick, pumper, nor hardly any man-made changes to that particular area period. I'm talking about the land between old state hwy 77 and 487. If a toxic carbon smog cloud were to settle on this high-elevation basin, I can't see it hanging around and overcoming the consistent and strong winds that blow here often (as evidenced by many wind turbines nearby:). My simple logic and personal experiences tell me that there are much greater factors in sage grouse decline than thoughtfully placed oil rigs. For all the far lefties that want to diminish my character and argue endlessly, please re-read the previous statement that I am only conveying 'my simple logic and personal experiences'. I care about my state and had an opportunity to express my views via web-link in the Casper paper inviting my input, that's all...plus that, I've got to get back to work to help pay for all this newer socialistic free stuff and the hundreds of feral (not wild) horses, many of which will eat from your hand, that are in two different non-joining areas just within a few miles of me, many of which cost the taxpayer almost \$2/day. Gosh, I hope these 'wild' animals that were NOT here 15 or 20 years ago, aren't destroying some other Wyoming creature's habitat? It's not an oil rig. Things change. Go figure.

Greg Ressler

Sent from [Mail](#) for Windows 10



WGFD HPP <wgfd.hpp@wyo.gov>

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## Sage-grouse Executive Order

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**Hustace Scott** <hustace@gmail.com>

Fri, Apr 26, 2019 at 5:58 AM

To: wgfd.hpp@wyo.gov

Attached are the comments from the Bates Hole/Shirley Basin Local Working Group.

Stacey Scott, Chairman



**BHSBLWG Comments on Executive Order Review.docx**

19K

# BHSBLWG Executive Order Review Comments

March 28, 2019

- Attachment B, Page 14 – Long-term impacts to sage-grouse from industrial wind development and associated powerlines and infrastructure are not well understood, especially considering sage-grouse avoidance of anthropogenic disturbance typically occurs over a long time frame. While some research was conducted in the 7-Mile Hill area, the time frame with this research is not sufficient to fully understand residual avoidance over multiple generations of affected sage-grouse. Therefore, wind development should continue to be prohibited within core areas.
- “Therefore” that should be added to the Executive Order – There is a need to better understand impacts to sage-grouse resulting from permissible levels of development as outlined in the current Executive Order. Are current development stipulations and protections, both within and outside of core, sufficient to maintain healthy sage-grouse populations over the long term? This is especially imperative to understand in areas where development begins to reach maximum allowable thresholds within core areas. To this end, a robust monitoring program should be instituted across the state to continually evaluate the efficacy of the Executive Order and core area strategy to better understand whether protection measures are sufficient to ensure viable sage-grouse populations over the long term. This monitoring program should be adequately funded to ensure personnel and resource needs are sufficient to monitor sage-grouse impacts across the state. There should also be a clearinghouse of publicly-available information such as annual reports, to advance the proactive and multi-scale management of sage-grouse in the State. We suggest adding the following:
  - **WHEREAS**, the State of Wyoming recognizes the necessity of managing Greater sage-grouse adaptively given gaps in our knowledge regarding the species’ behavior and management of the species’ habitats; and
  - **WHEREAS**, science, information, and data continue to emerge regarding these gaps in our knowledge of habitats and behaviors of the Greater sage-grouse; and
  - **WHEREAS**, the State of Wyoming recognizes the necessity of research to address new and existing data gaps and to contribute to emerging information; and
  - **WHEREAS**, the State of Wyoming recognizes the necessity of a robust and scientifically rigorous system of monitoring; and
  - **WHEREAS**, the State of Wyoming recognizes the necessity of maintaining a meaningful clearinghouse of information, which includes publically-available

information such as annual reports, to advance the proactive and multi-scale management of Greater sage-grouse in the State; and

- **WHEREAS**, the review process built into Wyoming's Greater sage-grouse Core Area Protection strategy provides a mechanism to evaluate inter-agency efforts, emerging science, information, and data and to incorporate this information and the information established from monitoring data into reports and updated management recommendations from the Sage-Grouse Implementation Team.
  - **THEREFORE**, the State of Wyoming will support the development and maintenance of a clearinghouse of information, which contains all data and reports relevant to implementation of this Executive Order.
  - **THEREFORE**, State agencies shall report and publish all conservation and permitted actions occurring within Greater sage-grouse Core Population Areas annually, or more frequently, as determined necessary. This reporting shall include the delivery of all non-proprietary data collected as part of these actions to be included in the State's database.
  - **THEREFORE**, the State of Wyoming shall work collaboratively with federal, state, county, private and non-governmental organization partners to collect data to determine and report annually on the condition of each Core Population Area in relationship to the goals of the Wyoming's Greater sage-grouse Core Area Protection strategy. These data will be compiled in a centralized database. The State of Wyoming will work with research organizations to promote the analyses of the database to provide updated management information to the SGIT.
  - **THEREFORE**, the State of Wyoming shall continue to monitor and document Greater sage-grouse populations and development activities to ensure that permitted activities under this authority do not result in negative impacts to Greater sage-grouse outside cyclical trends.
- "Therefore" that should be added to the Executive Order – There is a need to better understand residual impacts to sage-grouse resulting from allowable levels of development in core (5% disturbance and 1 development per 640 acres). We suggest adding the following:
- **THEREFORE**, Development in Core Population Areas consistent with the stipulations set forth in Attachment B are understood to be deemed sufficient to demonstrate that the activity will avoid negative impacts to Greater sage- grouse in most situations. However, it is understood that residual impacts may remain following the implementation of stipulations set forth in Attachment B, and that mitigation as established in Attachment H sufficient to completely offset these residual impacts individually and cumulatively may be necessary.
  - **THEREFORE**, Maintaining high quality habitat is important to the success of the core population area concept. The sooner a disturbed area can return to functioning native habitat, the more likely we will be able to maintain both sagebrush habitat and Greater sage-grouse populations. Incentives to accelerate or enhance required reclamation in habitats adjacent to or within Core Population Areas should be developed, including but not limited to stipulation waivers, funding for enhanced

reclamation, and other strategies. Both core and non-core populations could be impacted by early reclamation practices short-term.

- “Therefore” that should be added to the Executive Order – There is a need to recognize the impacts due to development outside of core areas and outside of Wyoming. We suggest adding the following:
  - WHEREAS, the State of Wyoming recognizes that effective management of Greater sage-grouse in the State will necessitate actively working across jurisdictional boundaries to include the boundary of Wyoming;
  - THEREFORE, The management of non-core habitats, designated as General Habitat Management Areas (GHMA) in federal plans, should be conducive to maintaining connectivity among Core Populations Areas throughout Wyoming and between habitats in Wyoming and neighboring states. The importance to long-term core sage-grouse population sustainability of non-core habitats as connectivity corridors, and the potential for these areas to increase in conservation value as a result of climate change, has been established in the scientific literature.
  - THEREFORE, State agencies shall work collaboratively with those responsible for the management of Greater sage-grouse in all States with populations of the species to ensure Wyoming’s plan is maintained as an integral component of management of Greater sage-grouse across the range of the species.
- Attachment C (add new bullet point) – Large landscape-scale herbicide treatments focused on reducing invasive annual grasses (e.g. cheatgrass) should be considered exempt from DDCT requirements so long as sagebrush canopy cover is not reduced and long-term viability of forb communities will be maintained.
- Attachment C (add new bullet point) – Prescriptions designed to remove encroaching conifers to enhance sage-grouse habitats via mechanical and chemical treatments should be considered exempt.
- Page 2 WHEREAS # 19, add a “Therefore” statement – The management of non-core habitats should be conducive to maintaining connectivity among core population areas throughout Wyoming and between habitats in Wyoming and neighboring states.
- WHEREAS #23 (Page 3 of 7): Recognize there is a need for range-wide conservation of sage-grouse to ensure the long-term viability of the species, and that states will benefit from interstate collaboration to ensure range-wide conservation measures are adequate across sage-grouse range.
- Attachment B, Page 12 of 16 – Clarification is needed as to what “monitoring” is required and should therefore be reported annually.
- Attachment B, Page 8 – Develop and formalize a standard noise measurement protocol.
- Attachment B, Page 10 – Reclamation standards should better define “shrubs”, and require any reclamation to return impacted shrub communities to pre-disturbance shrub composition (in terms of species and canopy coverage composition).
- Attachment B, Page 10 – Appropriate state permitting agencies shall ensure all required reclamation and noxious weed control standards for all mining activities be adhered to via rigorous monitoring and oversight.



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## sage grouse plan comments

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**Inyan Kara Grazing** <inyankaraga@rtconnect.net>

Thu, Apr 4, 2019 at 3:21 PM

To: wgfd.hpp@wyo.gov

Dear Wyo. Game and Fish,

I just have a few comments on the sage grouse plan.

1. Don't worry about these birds being so stupid as to fly into and be killed by your average barbed wire fence - I have never seen this occur in my lifetime.

2. Stop the hunting season on these potentially endangered birds.

3. If you are truly interested in the sage grouse - much more should be done on eliminating predators (e.g. - coyotes, hawks and eagles).

Single species management can never work - the whole is greater than the sum of the parts.

Jim Darlington, Range Mgr. Inyan Kara Grazing Ass'n - Newcastle

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This email has been checked for viruses by Avast antivirus software.

<https://www.avast.com/antivirus>



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage grouse habitat

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**Jennifer Williams** <whiteboulder13@gmail.com>

Tue, Apr 30, 2019 at 4:50 PM

To: wgfd.hpp@wyo.gov

Governor Mark Gordon  
Idleman Mansion  
2323 Carey Avenue  
Cheyenne, WY 82002

Director Brian Nesvik  
Wyoming Game and Fish  
5400 Bishop Boulevard  
Cheyenne, WY 82006

Dear Governor Gordon and Director Nesvik;

By default, Wyoming has some of the last pristine native ecology in the world. There is less than 5% left globally. As Vice President of the Bighorn Native Plant Society and Conservation Chair of Bighorn Audubon, I am pledged to protecting the little crumbs left of out undeveloped land. The work of protecting it is mostly unsuccessful. Development usually wins. Look at Yellowstone Park. People around the world are truly interested in our wildlife.

Do you want to be responsible for the demise of the Sage grouse? For what? Fossil fuel which when burned will melt more glaciers on our little planet.

I think Wyoming is capable of generating solar power. I am generating it. Are you?

Thank you.

Jennifer Williams  
PO Box 612  
Big Horn, WY  
82833  
307 763 3327

Sent from my iPad



WGFD HPP <wgfd.hpp@wyo.gov>

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## Sage Grouse

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**Jeremiah Chadwick** <rchadwick8@gmail.com>

Fri, Apr 19, 2019 at 1:08 PM

To: wgfd.hpp@wyo.gov

It's not hard to figure out why sage grouse numbers are minuscule from what I remember !

Kill the Ravens, Crows, and Magpies !

Russell Chadwick

Sent from my iPhone



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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**sage grouse comments**

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**Jill Ottman** <jillrottman@gmail.com>

Wed, Apr 3, 2019 at 12:01 PM

To: wgfd.hpp@wyo.gov

I believe that it is important for Wyoming to take a leadership role in the matter of protecting sage grouse, being the state with the largest number of surviving sage grouse and the largest tracts of its habitat. My comments are below:

Jill Ottman  
Laramie, WY

**I would first like to say that referring to the bird as "finicky" is an anthropomorphism that is unprofessional and inaccurate. The bird does what it has done for millennia. If it does not behave when confronted with loss of habitat the way humans wish, that does not mean that the species is undeserving of our consideration for its survival.**

**We are already in the throes of a changing energy economy. Wyoming must alter its economic path if it is to have a viable future as a state. I do not see that exposing yet more acreage of sage grouse habitat to energy development is going to be useful in promoting Wyoming's evolving economy. Sage grouse don't relocate; if their breeding grounds are disrupted, the birds do not reproduce and the species is further endangered.**

**The sage grouse cannot change its behavior, but humans can. Let's make sure Wyoming isn't ultimately responsible for the loss of this wonderful species.**



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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**Sage Grouse Protection continuation**

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**inshisle@gmail.com** <inshisle@gmail.com>  
To: wgfd.hpp@wyo.gov

Thu, Apr 4, 2019 at 6:58 AM

This is a very important effort to help insure wildlife are always given priority in a State which we hope will always be above bell curve . That's why we choose Wyoming . That is where our grandchildren's future truly lies. Thank you Governor for recognizing this important species.  
Sent from my iPhone

Joe Dougherty - Cheyenne



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Comments on the Greater Sage-grouse Executive Order

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**John Berry** <jbwildone@gmail.com>

Thu, Apr 4, 2019 at 8:02 AM

To: wgfd.hpp@wyo.gov

The Executive Order as it is now written is focused on private industry. I suggest putting more emphasis on commitments specific to the State of Wyoming for improvements to Core Population Areas on lands controlled by the State. I don't have any idea as to the amount of Core Population Area that is under the jurisdiction of the State, but I suspect that it is a considerable amount.

I suggest putting more emphasis on the control of invasive species as a means of improving Core habitat. This could be added under the *Management Goals and Mitigation in the Greater Sage-Grouse Core Area Protection Strategy* heading.

I suggest putting more emphasis on the development and sharing of techniques/strategies for the enhancement of Core habitat and/or Greater sage-grouse populations, even on areas not subject to development. This could be added under the *Management Goals and Mitigation in the Greater Sage-Grouse Core Area Protection Strategy* heading.

John Berry  
Sheridan, Wyoming  
[jberry@wwcengineering.com](mailto:jberry@wwcengineering.com)



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage Grouse issue

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John Bowers <johnbowers2015@gmail.com>

Tue, Apr 30, 2019 at 1:10 PM

To: wgfd.hpp@wyo.gov

I think the Sage Grouse issue is like the global warming issue. It is fake. I think just as the global warming scam is intended to saddle the U.S. with a layer of economy-killing and communist global governance, so the intent of the Sage Grouse issue is to strangle American mining and petroleum.

Look at the totally ridiculous idea that oil, gas, and mineral resources cannot be produced at certain times of the year, because it will allegedly upset a bird and keep it from reproducing. Are people less important than a bird anyway?

Has there been any research looking into whether rainout of Chernobyl or Fukushima fallout are to blame for any reduction in Sage Grouse populations? Bobtail quail where I grew up in Missouri stopped being heard after Chernobyl and did not appear again until about 2010, which probably relates to some radiological half-lives.

Has there been any research looking into whether West Nile virus may have reduced their populations and that they may come back naturally? In Missouri, from about 2000 to 2012, the huge flocks of starlings common at times of the year were drastically reduced, but they came back. So, too, Bluejays where I used to live had weak calls. Their robust calls were not heard for several years, and they came back. I believe both of these were due to that virus, though inquiry with the Missouri Department of Conservation yielded that this issue was not being monitored, and birds populations were barely monitored by volunteers.

Another question that I've never heard brought up or answered is: If we took birds related to the Sage Grouse, and bred them around, could we not come up with a Sage Grouse? Pigeons can be bred into many varieties and strains, even with different numbers of bones. How do we know that the Sage Grouse is not some variant of another grouse, from which it could be bred back out if necessary?

Do we really have to shut down a huge chunk of mining and oil and gas production merely for this bird which supposedly is, not endangered, not threatened, not even rare?

Time would be better spent by the federal and state governments, investigating the environmental groups which conduct lawsuits against American states and industries. Is there foreign influence in these groups? Do foreign mining interests have involvement in these groups? If so, it needs to be trumpeted by government, because 98% of the 'news' media will not do it. If every principal of these groups were investigated for possible espionage, would any be found to be Americans or not? They are using a bird to try to shut down whole areas of the west from mineral and petroleum production. They should be suspect.

And if we are going to be wrongly brainwashing children in the public schools that life arose from chance and Darwin's conjecture is fact, then why should this bird not be allowed to go extinct, even if it were in danger of that?

People matter more than a bird which is not even listed. People matter more anyway.

Shut down huge areas from mineral and oil and gas use? So what, professional hunters can come in and be paid to kill wolves and keep them from endangering the Sage Grouse? Just like all the timber industry that was shut down for the spotted owl? Where professional hunters are paid to kill other owls that kill spotted owls?

We have 21,000,000,000,000 dollars in federal debt, and are wasting money on this stupid communist tool issue?

John Bowers  
Douglas, WY



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage Grouse Management Comments

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**Joshua Tatman** <joshualeetatman@gmail.com>

Sun, Apr 28, 2019 at 2:40 PM

To: wgfd.hpp@wyo.gov

I am writing to comment on upcoming updates to the Sage Grouse Executive Order. Wyoming's existing sage grouse management plan has been hailed around the world as an example of critical species conservation. Not only has it helped stabilize existing grouse populations, it has also allowed for continued energy development and agricultural land use. This prompts the old adage- "If it ain't broke, don't fix it."

I encourage the state of Wyoming to continue to use a conservative approach to new development in sage grouse core areas. It is imperative to the future of Wyoming's energy economy to avoid an endangered species listing of sage grouse. As tourism continues to become a larger sector of our economy, preserving species of interest in their relatively undisturbed habitat will become even more important.

I suggest maintaining the current core area protection strategy. We also need meaningful monitoring mechanisms in place to evaluate the success of management strategies. In addition, avoidance priorities should not be limited to lek buffers, but we also need to identify and conserve critical winter and brood rearing habitats.

Sage grouse are an iconic bird in Wyoming. As a Wyoming resident, I enjoy watching sage grouse lek in the spring, and hunting them in the fall. I fully support all science-based conservation efforts, so these birds can persist for perpetuity.

Sincerely,

Josh Tatman

Virus-free. [www.avast.com](http://www.avast.com)



120 S. Durbin • P.O. Box 2850 • Casper, WY 82602  
(307) 265-5178 • Fax (307) 265-1791

April 29, 2019

The Honorable Mark Gordon  
Governor  
200 W. 24<sup>th</sup> Street  
Cheyenne, WY 82001

RE: Comment Letter  
Sage-Grouse Executive Order 2015-4 Review

Dear Governor:

Kirkwood Oil and Gas LLC appreciates the opportunity to provide comments for the review of Sage-Grouse Executive Order 2015-4. Without question, the Executive Order affects the oil and gas industry the greatest.

Kirkwood Oil and Gas LLC is a family owned Wyoming company that employs over 55 people. The company, through its operating affiliate, Wesco Operating, Inc., operates over 400 producing wells in the State of Wyoming. Kirkwood is also a leader in developing new prospective areas to drill. With geology and geophysical data support, we acquire leases on many acres of federal, state and private land to test these new drilling concepts.

In addition to the employment associated with drilling and operating a new well, in the event Kirkwood is successful in finding new sources of oil and gas, the gross proceeds from those wells will pay the state a production severance tax of 6%, a production property tax to the respective county of 6.5%, another 11% property tax to said county on our facilities and 13-16% royalty which the state, in some cases, receives 48-100% of. All told, direct payments to the state translated in 2017 to \$1.2 billion or over \$2,000 for every person in the state. That amount defers taxes that would otherwise need to be collected from Wyoming's citizens.

Kirkwood believes the existing Executive Order could be improved by the following considerations:

- 1) Recognize that captive breeding is a valid option to address declining numbers. Testimony by wildlife officials in Wyoming appears to conclude this option is not viable. However, the Calgary Zoo in Alberta, Canada has not only collected and hatch eggs, but is releasing 66 birds in spring, 2019. Obviously this option exists and is viable in Canada. Failing to recognize its existence reduces the scientific integrity of Wyoming's efforts.
- 2) Compensatory Mitigation is being used to increase habitat, not ensure existing habitat remains useful and sustainable. No other industry in Wyoming is required to comply with this requirement. In addition, Wyoming is the only state that requires oil and gas

The Honorable Mark Gordon  
Comment Letter - Sage-Grouse Executive Order 2015-4 Review  
April 29, 2019

operators to obtain these credits. In most cases, habitat is better after reclamation occurs. The Executive Order should address the reuse of compensatory mitigation credits after successful reclamation has occurred.

Kirkwood recognizes the State of Wyoming's commitment to conserving the Greater sage-grouse population and is appreciative of the effort to continually reassess the Executive Order.

Thank you for this opportunity to comment. Should you have any questions concerning the statements I have made herein, please feel free to contact me.

Very truly yours,

A handwritten signature in blue ink, appearing to read "D. Steven Degenfelder", with a stylized flourish extending to the right.

D. Steven Degenfelder  
Land Manager



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Wyoming sage grouse plan

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**kristy Thompson** <kathompson14v@yahoo.com>

Wed, Apr 10, 2019 at 11:09 AM

Reply-To: "kathompson14v@yahoo.com" &lt;kathompson14v@yahoo.com&gt;

To: "wgfd.hpp@wyo.gov" &lt;wgfd.hpp@wyo.gov&gt;

As an owner of our family's 6th generation legacy ranch in Carbon County, I thank you for the opportunity to speak out about Wyoming's Sage Grouse Plan. The sage grouse advocacy group may be well intended, but I believe it is very misguided. The foot print from wind energy development on habitat and associated wildlife, agriculture and recreation is very damaging. I believe that by continuing down our current path the numbers of sage grouse in Carbon County will be desimated due to wind development. It is unbelievable to me that Power Company was able to carve themselves out of the core sage grouse area that will place greater challenges to us as their neighbor. What will we do when our sage grouse, as well as, our bald eagles become endangered. All because of the massive environmental footprint caused by wind energy development.

I will share three research articles, two released in 2018 and the third released in 2015.

\*RE: Docker EL 18-026 Three exhibits were submitted to the South Dakota PUC showing wind developments negative impacts on vegetation and soil health. The research showed that wind development in arid regions with annual rainfall of less than 17", caused soil drying that was counterproductive to grass health causing a reduction in plant carbon cycling and photosynthesis. The research showed that humidity at the plant level can decrease by 3%, as a result vegetative growth and the productivity of the surrounding vegetation decreased.

\*Harvard University Study released in 2018 studied the microclimate in and around wind power plants. They modeled diurnal and seasonal temperature differences which were consistent with recent observations of surface warming in and around the wind farm. The warming occurs because the wind turbines redistribute heat by moving the boundary layer. Environmental impacts are instant in wind farm microclimates raising temperatures from .24 degrees C - to 1.5 degrees C. Their study also found that as wind farms expand their power density declines. All else being equal, lower power densities mean larger land and environmental footprints.

\*Power lines restrict sage grouse movement: (8/2015) Transmission lines that funnel power from hydroelectric damage and wind turbines across Eastern Washington affect greater sage grouse habitat by isolating fragile populations and limiting movement.

These research articles show that wind farm development in Wyoming will have negative impacts on our vegetation and soil health which will affect our wildlife agriculture and recreation. The associated power line infrastructure will greatly affect the sage grouse habitat and migration as it passes thru core sage grouse populations at Walcott Jct.

Again thank you for the opportunity to share these studies that explain wind farm effects on habitat and wildlife.

Kristy Thompson - President RMSC

[Sent from Yahoo Mail on Android](#)



WGFD HPP <wgfd.hpp@wyo.gov>

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## Sage Grouse Comment

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**Lee Brown** <leon\_the\_peon@hotmail.com>  
To: "wgfd.hpp@wyo.gov" <wgfd.hpp@wyo.gov>

Wed, Apr 10, 2019 at 11:33 AM

...large flocks of sheep roaming the BLM and private land destroy nests trample the eggs and destroy habit...blaming the oil and gas industry for the main reason for the decline is just an easy place to put the blame...

...thank, you  
L. Hinkel  
...Sheridan

Sent from Lee's iPad...us ..."Veterans before refugees"...



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Protect our Sage Grouse and Their Environment

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**L Chesnut** <lwches2@gmail.com>

Tue, Apr 9, 2019 at 9:35 PM

To: wgfd.hpp@wyo.gov

Governor Gordon,

My husband and I moved to Cheyenne Wyoming to experience and enjoy the Western landscape. Since June 2016, we have traveled throughout the state, hiking through mountains, short-grass prairie, and enjoying so much that Wyoming has to offer. We didn't have a financial incentive to move here, in fact I accepted a substantial cut in salary while paying the costs of moving myself; all to be in this beautiful land. Today, we have purchased a home in Cheyenne, we are both employed in full-time jobs, and are strong contributors to Wyoming's economy. Our passion was to be in the Western environment and to learn more about the flora and fauna of this region and we are living that dream.

As you know, in 2010, the Fish and Wildlife Service (Service) determined that the Greater Sage-Grouse was threatened with extinction and warranted protection under the Endangered Species Act. In response, states, ranchers, conservationists, industry, scientists and federal agencies crafted a balanced conservation plan that protects habitat for sage-grouse and 350 other species, as well as sustainable economic growth for communities across the West. I was astonished when I learned about the spirit of cooperation and partnerships that formed to craft this plan. Those plans led the Service to reverse its 2010 decision and find the future for sage-grouse was secure: a historic victory for conservation and for collaboration.

As someone who cares about birds and the places they need to live, now and into the future, I urge you to continue the legacy of cooperation that has been in place around this issue: maintain the plan that was collaboratively developed and do not veer or deviate. I was so proud to learn that Wyoming was a leader as governors of many Western states worked together to protect the sagebrush sea. I don't want to see oil rigs scarring our short-grass prairies; please limit the areas where they can build and keep our lands pristine for Wyoming residents, for visitors to the state, and for future generations. It is not only about protecting the bird; it is about protecting the land and, indeed, the legacy of the West.

Thank you.

**Lorie Wayne Chesnut**

Lorie Wayne Chesnut, DrPH, MPH  
4112 Rangeview Drive  
Cheyenne, WY 82001



WGFD HPP <wgfd.hpp@wyo.gov>

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**As the Sage-Grouse Executive Order is being updated, ask the new Director of the Wyoming Game and Fish Department what is happening to the Western Association of Fish and Wildlife Agencies' initiative to protect the habitat of the lesser prairie-chicken in New Mexico, Colorado, Texas, Kansas, and Oklahoma. It will be a good lesson in updating the Sage Grouse Executive Order.**

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**Lyman McDonald** <dad@mcdcentral.org>  
Reply-To: dad@mcdcentral.org  
To: wgfd.hpp@wyo.gov  
Cc: Lyman McDonald <lmcdonald@west-inc.com>

Thu, Mar 7, 2019 at 5:02 PM

Lyman McDonald  
2818 Pope Springs Road  
Laramie, WY 82070  
[dad@mcdcentral.org](mailto:dad@mcdcentral.org)



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Greater Sage-Grouse Executive Order Comments

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MARGIE TAYLOR <margietay4030@msn.com>  
To: "wgfd.hpp@wyo.gov" <wgfd.hpp@wyo.gov>

Tue, Apr 30, 2019 at 5:28 PM

Date: April 30, 2019

To: Governor's Office and Wyoming Sage Grouse Implementation Team

Via email: [wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

RE: Comments on Potential Revisions to:

Sage-Grouse Executive Order 2015-04

Governor Mead's Revised Compensatory Mitigation Framework  
Executive Order 2018-03 Compensatory Mitigation Credit Provider Approval Process

Thank you for the opportunity to comment on the Greater Sage-grouse Executive Orders. These orders have made Wyoming a leader in conserving sage-grouse habitat but several revisions would improve this regulatory regime from my perspective as a rancher and environmental policy analyst.

1. **The compensatory mitigation framework needs to remove barriers to and perhaps even create incentives for all ranchers with sage-grouse habitat to participate in the credit program.** As currently written, the framework requires 50-year or more habitat conservation commitments, significant financial assurances, responsibility to replace habitat lost due to "acts of God" (i.e. wild fire, hail), and no differentiation between poor- and high-quality habitat. All of these have a chilling effect on a landowner considering whether to participate. Large, wealthy landowners may be able to sustain the costs of getting certified to offer credits and commit to 50 plus year contracts but those ranches are likely to survive regardless of receiving some income from credits. It is the family-owned ranches that are the backbone of wildlife habitat conservation and that may only maintain that habitat if they can receive some income for their conservation commitment. For that reason, all aspects of the orders need to be examined for barriers to the broadest possible participation. I would look to the Wyoming Stock Growers' comments for more specific recommendations regarding removing barriers and creating incentives.
2. **There needs to be an absolute requirement for credits to be within reasonable proximity to the impacted sage-grouse population.** As currently written, compensatory mitigation is design to protect the species and not a particular population (E.O. 2015-4 Attachment H). I can understand the difficulty of trying to protect a specific impacted population but absent an absolute proximity requirement (like a 50- or 100-mile radius) a whole regional population could be wiped out if the credits were secured from a location in a distant corner of the state. There are too many factors negatively impacting sage-grouse (West Nile virus, burgeoning raptor and corvid populations, invasive grasses, climate change) to not require at least regional proximity to insure protection of regional populations. Requiring such proximity also could serve as an incentive for more ranches to participate in the credit program.

I appreciate the opportunity to comment and look forward to seeing a revised executive order.

Sincerely,

Margie Taylor

[20 Deer Haven Drive](#)

5/1/2019

State of Wyoming Mail - Greater Sage-Grouse Executive Order Comments

[Sheridan, WY 82801](#)



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage Grouse Plan

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**Marti Halverson** <mhalverson@silverstar.com>

Thu, Apr 4, 2019 at 8:59 AM

To: wgfd.hpp@wyo.gov

The plan needs to allow more livestock grazing.

There is a symbiotic relationship between the birds and livestock - the height of the sage grouse population in the 1930s and 1940s was also the height of grazing on the public land. Ecologist Allan Savory shows that grazing improves habitat.

Leaving the habitat alone is a recipe for disaster, yet college-educated “-ologists” would have us do just that.

Allow more grazing in sage grouse habitat.

Marti Halverson  
Etna, Wyoming



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Public Comment-Sage Grouse Plan

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**Mary Vivion-Withrow** <mmvrms@icloud.com>

Thu, Apr 11, 2019 at 10:13 AM

To: wgfd.hpp@wyo.gov

As a native Wyomingite who holds sacred the values that (used to) run deep in Wyoming, I am astonished at the hypocrisy inherent in this extensive sage grouse plan. The empty lip service paid to preserving critical sage grouse habitat is fully undermined by regulatory actions; the most egregious of which being the consistent facilitation of endless wind turbines and the huge 500kV transmission lines being constructed to handle the volatile output from those turbines. At least be honest enough to acknowledge that commitment to the sage grouse is nothing more than a bureaucratic exercise to capture attention while the State facilitates the rapid and dramatic devastation of habitat whenever and wherever it sees dollar signs or political influence (e.g. Anschutz, PacifiCorp). How tragic that the sage grouse and the Code of the West are now in jeopardy.

Mary Vivion-Withrow



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## How to implement improvements in sage grouse numbers

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**Maury Jones** <jonesy@reagan.com>

Thu, Apr 4, 2019 at 12:40 PM

To: wgfd.hpp@wyo.gov

Hi,

I just commented on predation being a huge factor in sage grouse. Specifically Ravens destroy their nests.

Here is how we must implement a plan to improve numbers of Sage grouse. Immediately remove ravens and crows from protected status. This will probably have to go through Congress because they are a migratory bird. However to get around that migratory bird Restriction we could have an open season on them immediately from November 1 through March 31. Those would be ravens who do not migrate.

Please pass that on to the Sage Grouse study team.

**Maury Jones**  
[505 E. Zenith Dr.](#)  
Jackson, WY 83001  
307-887-3356  
[JonesyJacksonHole@gmail.com](mailto:JonesyJacksonHole@gmail.com)

Virus-free. [www.avast.com](http://www.avast.com)



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Feedback on Sage Grouse

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**Maury Jones** <jonesy@reagan.com>  
To: wgfd.hpp@wyo.gov

Thu, Apr 4, 2019 at 12:34 PM

Hi,  
I see that Gov. Gordon has extended the time for us to comment on the Sage grouse.

Research has proven that predators are the single biggest factor in limiting Sage grouse populations. Please see the attachment and please scroll down to where it says Predators in Black.

Here is a quote from it. "According to research biologists who study raven predation, these black birds have a more deleterious effect on sage hen nest survival than any other single element, even more than the amount of cover in the habitat."

So my input is; No matter how much we talk about habitat, until we greatly reduce the numbers of Ravens, crows, badgers, coyotes, and foxes, we will NEVER be able to increase the numbers of sage grouse.

The sage grouse population began the decline about the time that we started protecting Hawks owls ravens crows badgers and other critters that prey on Sage grouse.

Thanks,  
Jonesy

**Maury Jones**  
[505 E. Zenith Dr.](#)  
Jackson, WY 83001  
307-887-3356  
[JonesyJacksonHole@gmail.com](mailto:JonesyJacksonHole@gmail.com)

Virus-free. [www.avast.com](http://www.avast.com)

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**SageGrouseStudy.pdf**  
3102K



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

## Sage Grouse Executive Order comments

**Meredith Taylor** <metaylor@wyoming.com>

Mon, Apr 29, 2019 at 5:28 PM

To: wgfd.hpp@wyo.gov

Cc: metaylor@wyoming.com

To: Wyoming Game and Fish Department

From: Meredith Taylor

Date: April 28, 2019

I appreciate that Wyoming Governor. Mark Gordon has asked the national public to weigh in as he considers revising the way the state manages the sage grouse. As the sage grouse population declined over the past several decades it has been considered for an endangered species listing under the Endangered Species Act (ESA). That decision was avoided in 2015 due to alternate federal and state plans of the Core Area Protection Strategy to protect the bird's habitat. Unfortunately, the Core Area Protection Strategy formulated by the state of Wyoming and the Obama administration, was recently revised by the Trump administration. The new plan concerns those of us who care about the future of the sage grouse, because it could lead to a listing decision.

The Wyoming strategy for conserving sage grouse began as an executive order by then-Gov. Dave Freudenthal and Governor Mark Gordon has now, to his credit, solicited feedback from state sage grouse leaders on how the Sage Grouse Executive Order (SGEO) may be revised under his administration. The current call for public comments is an extension of that request. Gordon has said that he wants to get up to speed on sage grouse conservation and wants feedback to help him "improve on what is already working while keeping a steady course."

Toward that goal, I offer the following ideas.

1. On page 2 of the SGEO (Order 2015-4) #3-5 whereas sentences state that the (ESA) "listing of the Greater sage grouse would have a significant, adverse effect on land and natural resource management, the economy, and the custom and culture of the State of Wyoming." Sadly, this is just over-stated hyperbole. However, more accurate is the fact that extirpation of the sage grouse may have a significant, adverse effect on the State of Wyoming, its citizens and the Greater Yellowstone Ecosystem. This language should be amended or that statement deleted in the revised SGEO.
2. On page 2 of the SGEO #10 whereas sentence states that "Wyoming's Greater sage grouse Core Area Protection strategy protects significant quantity and quality of sage grouse habitat and protects a substantial portion of Wyoming's Greater sage grouse." Unfortunately, I think that goal is not met due to the fact that the Department of Interior (DOI) and Bureau of Land Management (BLM) have ignored the leasing and development stipulations on Core Areas and proceeded with business as usual. This laissez-faire attitude has led to the continued decline of the sage grouse and its habitat in Wyoming. Identification, protection and monitoring of the Core Areas are essential to the success of the Greater sage grouse Core Area Protection strategy. Most parts of the SGEO are satisfactory for accomplishing sage grouse conservation, but only if they are strictly enforced.
3. As stated in sentence #1 on page 4 of the SGEO, "State agencies shall strive to maintain consistency by following the procedures outlined in this Executive Order...." However, #5 on page 4 states that "Land uses and activities inside Core Population Areas for which stipulations have not been developed in the Executive Order may be authorized on a case-by-case basis..". This should be corrected to state that all proposed uses and activities should have specific stipulations developed by Wyoming Game and Fish Department (WGFD) and be strictly enforced. It appears that the BLM is deferring to the WGFD for specific stipulations, so the state should make these specific stipulations based on the goal of successful sage grouse conservation. For instance, Core Areas such as the Golden Triangle should not have been leased for oil and gas. What inevitably occurs when a Core Area is developed is what happened in the Douglas Core Area Restoration Project in 2014 where 100,000 sagebrush seedlings were planted to regenerate 5000 acres of Sage Grouse Core Population Area that had been impacted. Sagebrush habitat is very difficult to restore as Wyoming has discovered over many decades of research. The best way to successfully manage sage grouse and their habitat is to

protect the designated Core Areas from development.

4. As stated in sentence #7 on page 5 of the SGEO that "Development consistent with the stipulations set forth in Attachment B shall be deemed sufficient to demonstrate that the activity will avoid negative impacts to Greater sage grouse." Unfortunately, WGFD has already recommended 30 exceptions to Core Areas. The stipulations defined by WGFD should be biologically oriented to protect the sage grouse without exceptions.

5. The Wyoming Oil and Gas Conservation Commission claims that of 727 new drill rig spuds, there are 27 in Core Areas and 10 in Connectivity Zones. This could explain the current downcycle of sage grouse as the quantity and quality of many sage grouse Core Areas are compromised. This is serious impact for not only the sage grouse but also for other migratory wildlife throughout Wyoming. WGFD and the other agencies should coordinate with the Wyoming Migration Initiative to cooperatively reach the same goals of wildlife and habitat protection.

6. The Core Area Protection strategy should be carefully evaluated for its effectiveness before any future decisions are made. In recent leasing decisions in Wyoming, the BLM has ignored Core Area protection. The Core Area Protection strategy is only as good as the agencies' enforcement of it. To assure that the Core Area Protection strategy works, there must be adequate state and federal funding and enforcement to reach its goals. Without adequate enforcement of WGFD's strict stipulations, I'm afraid we will continue in the present sage grouse downcycle we're in right now. Unfortunately, that could inevitably lead to the Greater sage grouse being listed under the ESA. Wyoming needs to step up to the plate if it wants to demonstrate that it is capable of protecting sage grouse and their Core Areas. Otherwise, the Greater sage grouse will be managed by the USFWS as a listed species.

In conclusion, I offer these recommendations in hopes that we can all work together to accomplish our mutual goal of sage grouse conservation.

Sincerely, Meredith Taylor



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Comments/Suggestions on the existing SG Executive Order

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**Tracy Jones** <TracyJ@precorp.coop>

Wed, May 1, 2019 at 3:58 PM

To: WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

Cc: "Leslie Schreiber (WGFD SG Coordinator) (leslie.schreiber@wyo.gov)" &lt;leslie.schreiber@wyo.gov&gt;

To whom this may concern,

Please accept this letter and EO comments on behalf of the NE Wyoming SG LWG.

Regards,  
Tracy Jones  
Chairman, NE Wyoming LWG

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### 2 attachments

**Cover Letter for EO Comments.pdf**

71K

**2015 Executive Order Review Comments\_NEWLWG.pdf**

87K

NORTHEAST WYOMING  
SAGE-GROUSE WORKING GROUP



## NORTHEAST WYOMING SAGE-GROUSE WORKING GROUP

May 1, 2019

To whom this may concern,

We would like to thank you for the opportunity to provide comments on the formation of the new Executive Order (EO) under Governor Mark Gordon. We appreciate the Governor's position to gather intelligence from the public before releasing the next EO. The lower working groups (LWG's) have put in a lot of effort and contributed grant dollars to development more science-based data. This data is essential to making good decisions that impact the sage-grouse species and habitat.

The Northeast LWG did not take this task lightly and convened on March 19<sup>th</sup> to come up with the attached suggestions for clarification on the base document. If you need to have further dialogue on any of these suggestions, please don't hesitate to contact either myself or Dan Thiele.

Regards,

Tracy Jones  
Chairman, NE Lower Working Group

## **Northeast Wyoming Local Working Group Executive Order 2015-4 Revision Comments**

April 8, 2109

Page 1 – Title – Greater Sage-grouse Core Area Protections – The Executive Order’s current title focuses on core areas while the order addresses habitats including winter concentration areas, connectivity areas and transmission corridors. We suggest a more inclusive title, Greater Sage-grouse Protections.

Page 3, paragraph 4 – BLM RMPs have been revised and the USFS Plan is expected to be revised by mid/late summer 2019.

Page 4, paragraph 4 (#4) – delete sentences 3 and 4. “Core Population Areas have been mapped to include additional habitat beyond that strictly necessary to prevent the listing of Greater sage-grouse. The additional habitat included within the Core Population Area boundaries is adequate to accommodate continuation of existing land uses and landowner activities.” We believe these statements are not applicable to a revised EO.

Page 5, paragraph 3 (#8) – we suggest added clarity to recommendation #8 with regard to stipulation waivers. For example, stipulation waivers to facilitate reclamation seeding success are warranted in some cases provided local coordination with Wyoming Game and Fish Department and BLM managers occurs. Delete the last sentence, “It is recognized that some incentives may result in reduced numbers of Greater sage-grouse outside of Core Population Areas.” We believe this statement is not applicable to a revised EO.

Page 5, paragraph 4 (#9) – we believe this action conflicts with regulatory mechanisms provided for in the order. There is no need to recommend a non-regulatory approach as a non-regulatory approach occurs by default when regulations are not applicable. The second sentence reflects regulatory action rather than non-regulatory.

Page 5, paragraph 6 (#11) - connectivity areas and winter concentration areas should be included in this recommendation.

Page 5, paragraph 8 (#13) – we do not believe this recommendation provides adequate protection for the significant amount of high density breeding habitat located outside of core and connectivity habitat in northeast Wyoming. Core area, as a percentage of the working group breeding population, is under-represented in northeast Wyoming. More protections are needed for this critical habitat.

Page 6, paragraph 7 (#20) – suggest adding connectivity areas and winter concentration areas to this recommendation.

Page 6, paragraph 8 (#21) – this recommendation is OK as written. However, we again state the importance of the lack of high density breeding habitat protected by core and connectivity habitat in northeast Wyoming. For 2016-18, only 51% of breeding males are accounted for in core habitat in northeast Wyoming (57% in core and connectivity) whereas 86% of breeding males are included in core habitat in the remainder of Wyoming. This recommendation may limit opportunities to make gains in protecting crucial habitats in northeast Wyoming, as these opportunities can be time sensitive. Areas of high density breeding habitat are currently identified for addition into core or connectivity habitat.

Attachment H - Offsite Mitigation - we are concerned that off-site mitigation compromises conservation efforts in northeast Wyoming given the limited number of breeding males accounted for within core and connectivity habitats. We again emphasize that only 51% of the 2016-18 breeding males were in core areas. Therefore, mitigating off-site has negative impacts to the population. Northeast Wyoming is critical to facilitating genetic connectivity between Management Zones 1 and 2. We offer that no mitigation in northeast Wyoming should occur until credits can be applied "on-site". Until then, regulatory measures should be applied. Another option would be to allow the working group to apply credits to habitat conservation projects in northeast Wyoming.



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## NRCS Comments on SGEO 2015-4

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**Jensen, Brian M - NRCS, Casper, WY** <Brian.M.Jensen@wy.usda.gov>

Thu, Mar 28, 2019 at 3:55 PM

To: "wgfd.hpp@wyo.gov" &lt;wgfd.hpp@wyo.gov&gt;

Cc: "Martinez, Astrid - NRCS, Casper, WY" &lt;astrid.martinez@wy.usda.gov&gt;, "Meyer, Andi - NRCS, Casper, WY" &lt;Andi.Meyer@wy.usda.gov&gt;

WGFD Habitat Protection,

Please find attached comments from the WY NRCS on the current Sage Grouse Executive Order for consideration by Governor Gordon. If you would like them in a more formal format, we would be glad to provide them that way. If you have any questions about our comments, please feel free to contact me. Thanks for the opportunity to provide comment!

Brian

Brian M. Jensen

State Biologist

USDA-NRCS, PO Box 33124, Casper, WY 82602

307-233-6740, 307-337-5686 (cell)

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**NRCS Comments on Executive Order 2015-4.docx**

14K

## NRCS Comments on Executive Order 2015-4

Page 3, 5<sup>th</sup> whereas statement: consider adding “Working Lands for Wildlife (WLFW)-“ before “Sage Grouse Initiative (SGI)” as the name of this program has been expanded with recent Farm Bills.

Page 5: Do we have enough movement and genetic information to refine the connectivity areas at this time?

### Attachment C:

Suggest incorporating the “Clarification on the Application of Attachment C of EO 2015-4” information into the Attachment itself.

Items 1, 2, 8, 9, and 12: Is it possible to clarify whether “construction” includes mobilization to and from the construction site when the actual construction site is further than 0.6 miles from a lek, but the access road(s) are not? There has been confusion from our field staff and landowners.

Item 14: Suggest broadening this activity description. Currently it’s not real clear whether this includes treatments for invasive weeds outside of disturbed areas (e.g. cheatgrass treatment in undisturbed rangeland).

All Attachment C, but mainly item 1: Is there any sort of contingency/waiver process if the original construction does not go as planned and construction needs to be altered slightly while the equipment is on site? I believe this is allowed in some cases for O&G development.

All Attachment C: Is there a need for a more formal “habitat evaluation” training for biologists and review/certification process from WGFD? Some field staff have requested a more formal closeout of this process after a review is complete and have questioned whether they can be trained to complete the evaluations.

Item 15: Should read “Resource~~s~~”

### Attachment F:

Page 2, 2<sup>nd</sup> bullet- Should read “Natural Resource~~s~~ ...”

Suggest incorporating EO 2017-02 into this section

### Attachment G:

Page 1, Item 1: Should read “Natural Resource~~s~~ ...”

### Attachment H:

Suggest incorporating EO 2018-03 into this section or as a separate attachment.



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Pathfinder Ranches Sage Grouse Executive Order Comments

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**Ryan Lance** <ryan.lance@pathfinderranches.com>

Fri, Apr 26, 2019 at 2:41 PM

To: "wgfd.hpp@wyo.gov" &lt;wgfd.hpp@wyo.gov&gt;

Cc: Bob Budd &lt;bob.budd@wyo.gov&gt;, Matt Hoobler &lt;matt.hoobler@pathfinderranches.com&gt;, David Freudenthal &lt;dfreudenthal@freudenthallaw.com&gt;, Mia Fox &lt;mia.fox@pathfinderranches.com&gt;, "beth.callaway@wyo.gov" &lt;beth.callaway@wyo.gov&gt;

To Whom It May Concern,

Please find attached Pathfinder Ranches, LLC's comments following Governor Gordon's invitation to offer suggestions regarding the updating of the various Greater sage-grouse Executive Orders and related documents.

If you have any questions, please contact me at [Ryan.Lance@PathfinderRanches.com](mailto:Ryan.Lance@PathfinderRanches.com) or 307.459.3636.

**RYAN LANCE****President****P:** 307.459.3636 | **M:** 307.631.3116**MA:** P.O. Box 768, Cheyenne, Wyoming 82003-0768 | **PA:** 1604 Pioneer Avenue, Cheyenne, Wyoming 82001[www.PathfinderRanches.com](http://www.PathfinderRanches.com)   

**NOTE MY NEW ADDRESS. Sweetwater River Conservancy is now Pathfinder Ranches, a Sammons Enterprises, Inc. company**

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**Executive Order Revision Comments - Pathfinder Ranches 4262019.pdf**

1049K

# PATHFINDER RANCHES

April 26, 2019

The Honorable Mark Gordon  
Idelman Mansion  
2323 Carey Avenue  
Cheyenne, WY 823002-0010

And via email to [wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

Re: Greater Sage-Grouse Executive Order Revision Comments

Dear Governor Gordon:

Pathfinder Ranches, LLC is pleased to offer comments and suggestions regarding your potential revision of Greater Sage-Grouse Executive Orders 2015-4, 2017-2 and 2018-3. As a general matter, Pathfinder Ranches believes that the State of Wyoming's sage-grouse conservation strategy is sound. The strategy has been subjected to U.S. Fish and Wildlife Service (USFWS) review, federal court challenge and the day-in-day-out tests that come with simply administering the program and has withstood each test.

Our comments are wholly related to the state's administration of compensatory mitigation to secure and manage both core and non-core sage-grouse populations. To date, the program has worked to ensure the continued viability of oil and gas production, coal and bentonite mining, uranium development, highway, powerline, pipeline and other infrastructure construction, agriculture and wind and solar facility siting and preclude a listing under the Endangered Species Act (ESA).

## PATHFINDER RANCHES

Pathfinder Ranches owns and operates the Sweetwater River Conservancy Greater Sage-Grouse Habitat Conservation Bank (SRC Sage-Grouse Bank), which is the first conservation bank approved by the USFWS to offset impacts to the Greater sage-grouse in the United States. The SRC Sage-Grouse Bank is also the largest single bank in the nation. Importantly, no federal or state funds were used to establish and permit the SRC Sage-Grouse Bank. It is an entirely private enterprise aimed at reaching a balance

between the development of federal, state and private natural resources and the ongoing threat of listing the Greater Sage-grouse pursuant to the provisions of the ESA. Pathfinder Ranches provides a true landscape-scale approach to mitigation.

Pathfinder Ranches' banking and agricultural operations are situated on a vast collection of historical, working ranch lands near Alcova, Wyoming. Seventeen ranching families directly rely on Pathfinder Ranch lands for their economic futures – futures that are directly tied to not only the grass and water we provide, but to the success of Pathfinder's mitigation work as well. Pathfinder lands support robust populations of Greater sage-grouse, mule deer, pronghorn, elk, bighorn sheep and many other wildlife species. We are proud that we are among the most generous private landowners in terms of providing public access to these resources for hunting, fishing, hiking, other recreational use and research.

Our properties also benefit from considerable, senior water rights in the Sweetwater and Platte Rivers, which are critical to the support of upland, riparian and aquatic wildlife populations and ranching operations. Beyond wildlife, our properties are also home to "blue ribbon" segments of the Oregon, Mormon and numerous other historic trails.

## COMPENSATORY MITIGATION

Wyoming's approach to sage-grouse for at least two decades has been to emphasize conservation of essential habitat and bird populations in the context of balancing economic development and conservation. From the outset, it was recognized that avoidance and minimization would generally be an effective strategy to preserve essential habitat and populations. Wyoming also recognized there would be areas of unavoidable conflict between the conservation strategy and resource utilization. From the issuance of the initial executive order in 2008, up to and including the current version, there was always a provision for resolving those conflicts based on requiring offsetting conservation measures by the project component.

Upon its adoption in 2015, Appendix H to EO 2015-4 represented a formalization and clarification of the brief language that has been a fixture in every executive order that has been issued since 2008. Appendix H is

operating efficiently to achieve conservation goals and resource development on private and state-owned lands throughout Wyoming. Arguably it is achieving a higher conservation goal because of its rigid requirements for offsets. Historically, compensatory mitigation was based in ad hoc analyses, local, federal and state agency hopes, dreams, and aspirations and attempts to fund those more local desires, whether they were tied to sage-grouse impacts or not.

The net-net of prior mitigation approaches is that industry felt extorted (and was in many instances) and the sage-grouse lost ground, literally and figuratively. Using mitigation dollars that should have gone to on-the-ground avoidance, minimization and true compensatory mitigation for sage-grouse to fund federal and state salaries and clean up other, non-sage-grouse related messes does little for a species that is at constant risk of being petitioned for listing under the ESA is foolhardy considering the catastrophic impacts that a listing would have on state and federal economic development.

Given Wyoming's collective experience with compensatory mitigation, ranging from State Historic Preservation Office clearances to the offsite mitigation structures adopted in the Pinedale Anticline and Jonah Field developments, the adoption of Appendix H and the State of Wyoming – Revised Compensatory Mitigation Framework (Framework), including its provisions for seasonal exception relief, represented a logical next step to address past problems and embrace the successes of those earlier efforts. The Framework's sideboards and mitigation calculation tables eliminated many of industry's frustrations regarding the arbitrary nature of compensatory mitigation requirements, furthered the state's interest in securing unsecured core and other important habitats in furtherance of USFWS' conservation approach to the species and provided certainty and investment-grade assurances to the state's industries as they seek economic development in Wyoming.

As your administration considers changes to the various Executive Orders that combine to create the state's sage-grouse strategy, the vehicles available to provide compensatory mitigation should be limited by the requirement that the compensatory mitigation fully offset the effects in terms of degree of harm, length of harm and viability over time commensurate with the impact.

Further, the offset must exist before the harm is created. The State of Wyoming has generally rejected “in lieu fee” approaches to compensatory mitigation in the context of sage-grouse, because such programs focus on future mitigation for current harm and have often become “pay to play” programs. While Wyoming’s policy may seem strict—such discipline is necessary if Wyoming expects to conserve adequate habitat and population to avoid a future listing under the ESA.

Executive Orders 2015-4 (including Appendix H) and 2018-3 and the Framework work in concert to assure that Wyoming’s approach to sage-grouse management, including mitigation, are defensible and sound. Even so, that conservation structure can certainly be improved, primarily through small clarifications to Executive Order 2015-4 and the Framework. Pathfinder Ranches’ comments are solely geared to addressing these small clarifications.

### **Specific Comments**

#### *Amendment to Appendix H*

Appendix H to Executive Order 2015-4 should include explicit language that habitat conservation bank credits approved pursuant to the *Guidance for the Establishment, Use, and Operation of Conservation Banks* (USFWS, 2003) are acceptable in Wyoming and do not require any additional approval from the State of Wyoming. Credits that are permitted in accordance with 2003 USFWS conservation banking guidance and the ESA achieve the highest standards for certification and have been deemed by USFWS to “contribute to the recovery” of the target species, in this case sage-grouse. Therefore, there should be absolutely no question that such credits are acceptable as mitigation without any further action being required by the state. They have been used in Wyoming since 2014 – to the state’s, various industries’, state trust land beneficiaries’ and public’s great benefit – and it should be made clear that they can continue to be used into the future.

Irrespective of the direct language in Section IV(A) of Executive Order 2018-3, which makes a change to Executive Order 2015-4 and Appendix H somewhat duplicative, in the interest of absolute clarity, Pathfinder suggests that the following language be inserted into Appendix H:

**All State agencies required to review permit applications for compliance with Executive Order [insert new EO number], shall accept credits from Greater sage-grouse compensatory mitigation credit providers approved by the U.S. Fish and Wildlife Service pursuant to the *Guidance for the Establishment, Use, and Operation of Conservation Banks* (USFWS, 2003) before the date of this Executive Order should the State permitting agency determine that compensatory mitigation credits are required. Such credits shall not be subject to further approval by the State of Wyoming.**

### *Amendment to the Framework*

While likely a subject that will be deferred until the Legislature provides guidance regarding state-level credit certification in the upcoming Legislative Session, any Executive Order and Framework revision should be done to explicitly to draw a clear and bright line drawn between permanent credits and temporary (term) credits. There are two drivers for this comment.

First, referencing temporary and permanent credits together and in the same document could create a false equivalency. The permanent credits created by Pathfinder that exceed the requirements in the Framework and meet the stringent recovery standard of the 2003 USFWS banking guidance bear little resemblance to temporary credits. Second, a failure to properly distinguish between permanent and temporary credits could complicate the state's ability to assert a full range of defenses to a potential ESA listing, specifically including the ability to unequivocally state that Wyoming's compensatory mitigation program was literally signed off on by the USFWS itself.<sup>1</sup>

Temporary credits should not be sold to private parties or accepted by governmental entities as though they were permanent credits. Our free enterprise system works well, but only when we have a level playing field and a regulator that calls the balls and strikes consistently and does not allow

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<sup>1</sup> The SRC Sage-Grouse Bank was approved by USFWS on December 23, 2014. Amendment No. 1 to the SRC Sage-Grouse Bank was approved by USFWS on December 6, 2017.

anyone on the field unless they are properly equipped. Pathfinder welcomes competition so long as it is transparent, open and fully and fairly permitted.

While we are aware that some believe that providers of “credit lite” should not have to invest the sort of money Pathfinder had to spend and engage the acrobatics we were forced to endure to become certified – the credit product should not get the benefit of being equated to credits authorized under the 2003 USFWS guidance either.

Second, and perhaps more important to Wyoming, is the impact of temporary credit acceptance on the practical and policy considerations that stand behind the state core area strategy and Framework. Thus, to protect and fulfill the policy directives that have guided us in other sage-grouse pursuits, multiple policy touchstones should be considered if the State develops a mechanism to create temporary credits, specifically including:

Policy considerations:

- 1) Any credit should further the State’s interest in preventing the need to list the species under the ESA (maintenance of adequate habitat and bird population);
- 2) Creating a workable, science-based, transparent process that allows private industry to operate freely and to rely on the regulatory protections and compensatory mitigation-based assurances over time (certainty);
- 3) Countering drought, fire, invasive species, predation on credited lands over time (durability);
- 4) Ensuring against overutilization of credited habitat for at least as long as the impacts associated with the project using the credit persist on the landscape and affect the sage-grouse (durability and additionality);
- 5) Financial/practical capability to assure the credited habitat is viable and available to truly offset impacts to the sage-grouse until the project using the credits is restored and sage-grouse persist in the location (durability);
- 6) Creating a State regulatory mechanism to protect Wyoming’s economy if the sage-grouse is listed in the future by preserving our ability to gain ESA 4(d) provision protections; and



- 7) Ensuring Wyoming government does not have to appropriate funds in the future to pay for environmental and landowner burdens created today.<sup>2</sup>

With the listed objectives in mind, the question becomes one of how to create a temporary credit or “credit lite” without undermining the hard-fought progress to date. Essentially, the approach would be to create a separate section in the Framework with necessary supporting amendments to the Executive Order that clearly define the rules for creating, analyzing, utilizing, monitoring and policing temporary credits. The amendments to the Framework and Executive Order would need to demonstrate how the temporary credits, as defined and utilized, meet the original goals and requirements in the Executive Order and Framework and are appropriately valued vis-à-vis permanent credits.

Possible ways to address these concerns would likely involve:

- 1) Higher offset ratio for project impacts and/or greater discount for temporary credits;
- 2) Truth in advertising: temporary credits force the company to retain liability after the term ends or if there is default and credits may not be of any value if listing occurs and we need to be clear about these realities;
- 3) Financial assurances must be filed and retained until full reclamation and standards are met at the impact site obviating the need for continuing credit coverage;
- 4) Robust monitoring and standards for when a temporary credit is no longer required to offset impacts at the impact site must be established and funded at the time the credit is approved and utilized at a project-specific scale;
- 5) Temporary credits that do not meet a recovery standard should not be used in core and NSO areas given the importance of such areas to the state’s ability to continue to fend off listing pressure under the ESA;

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<sup>2</sup> Wyoming’s history with abandoned and orphaned oil and gas wells and leaking underground storage tanks provides a vivid reminder of the importance of such a policy consideration.

- 6) A contingency plan must be filed with any permit application using temporary credits to fully explain what happens in the event that the disturbance is not fully addressed prior to the expiration of the term credit or if the temporary credit is otherwise impaired prior to the end of the restoration and re-occupation of the disturbed site;
- 7) A clear understanding of the state's third-party right of enforcement and access to the compensatory mitigation credit site from a legal standpoint must be fully incorporated into any credit certification;
- 8) A management plan must be in place, with financial assurances to pay for management and monitoring, including adaptive management requirements, and the state must have a clear process to collect, review, monitor and trigger adaptive management consistent with management and monitoring results; and
- 9) A description of what happens if a temporary credit provider fails to manage consistent with the management plan or fails to monitor (including the company that bought the credit being re-saddled with offset obligations because the credit is no longer of any real value).

Even with these mechanisms, the problem associated with creating an adequate record to make these temporary credits legally and scientifically defensible in the context of the inevitable administrative and judicial proceedings surrounding the next petition to list the sage-grouse is very real. ESA and sensitive species litigation often turn on whether there is an adequate regulatory mechanism in place and whether there is adequate justification in the record for that mechanism.

Our ability to demonstrate to a court or administrative body that our regulatory system is adequate seems to be made more difficult if we create a temporary credit that fails to meet the standards we have previously stated that we hold as being almost sacred in Wyoming. Currently, the only record we have is one that strongly favors permanent credits and suggests that any deviation to accept temporary credits is due to political pressure being applied. While there may be short-term, localized population benefits of "credit lite" and tying up habitat for short stints, in the long run, temporary credits actually create more questions and a starkly higher potential for deferred threat realization down the road and will demand even more rationalization by the state in the context of the 2020 USFWS listing review when our story right now is quite compelling.

The recent experiences with the failure of temporary credit structures, including the impending collapse of the Western Association of Fish and Wildlife Agencies Lesser Prairie Chicken Range-wide Conservation Plan potentially leading to draconian impacts in the Permian Basin and failure to renew federal Conservation Reserve Program (CRP) contracts in the Midwest leaving multiple CRP-dependent species at risk are cautionary tales that should not be ignored. Closer to home and even more relevant are the increasingly dim prospects for the Colorado and Nevada sage-grouse mitigation exchanges and term credit programs.

A more immediate issue, though, is the litigation that has ensued following BLM's adoption of the sage-grouse resource management plan amendments. Certain environmental groups are already attacking BLM over the adoption of the state strategy and Framework. Those groups will have a heyday with the notion that Wyoming is creating a "credit lite" in the face of the expansive record favoring permanent protections and cataloguing of threats that are only fully ameliorated through permanent mitigation. While somewhat abrupt, Pathfinder does not want its federally-approved, peer reviewed bank and credits to be tainted by a court's or agency's disallowance of temporary credits once they are inevitably subjected to legal or regulatory challenge.

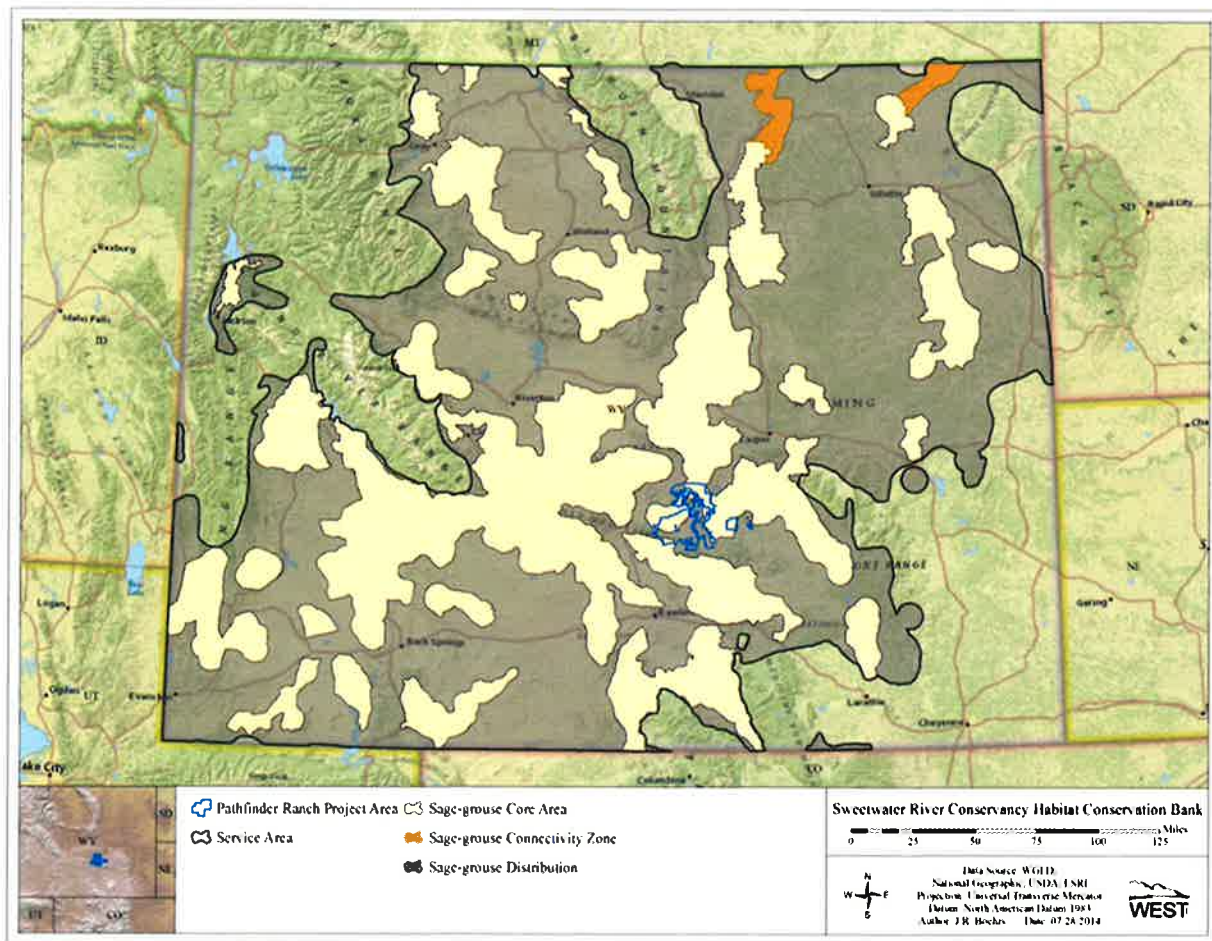
### *Geographic Proximity Criteria, Preference or Requirement*

Apart from these general comments associated with credit certification, Pathfinder Ranches is aware of comments that will suggest that the Executive Order be revised to impose a requirement or preference for habitat conservation credits to have some proximity to the impact that is being offset. Pathfinder Ranches will strenuously object to any such provision.

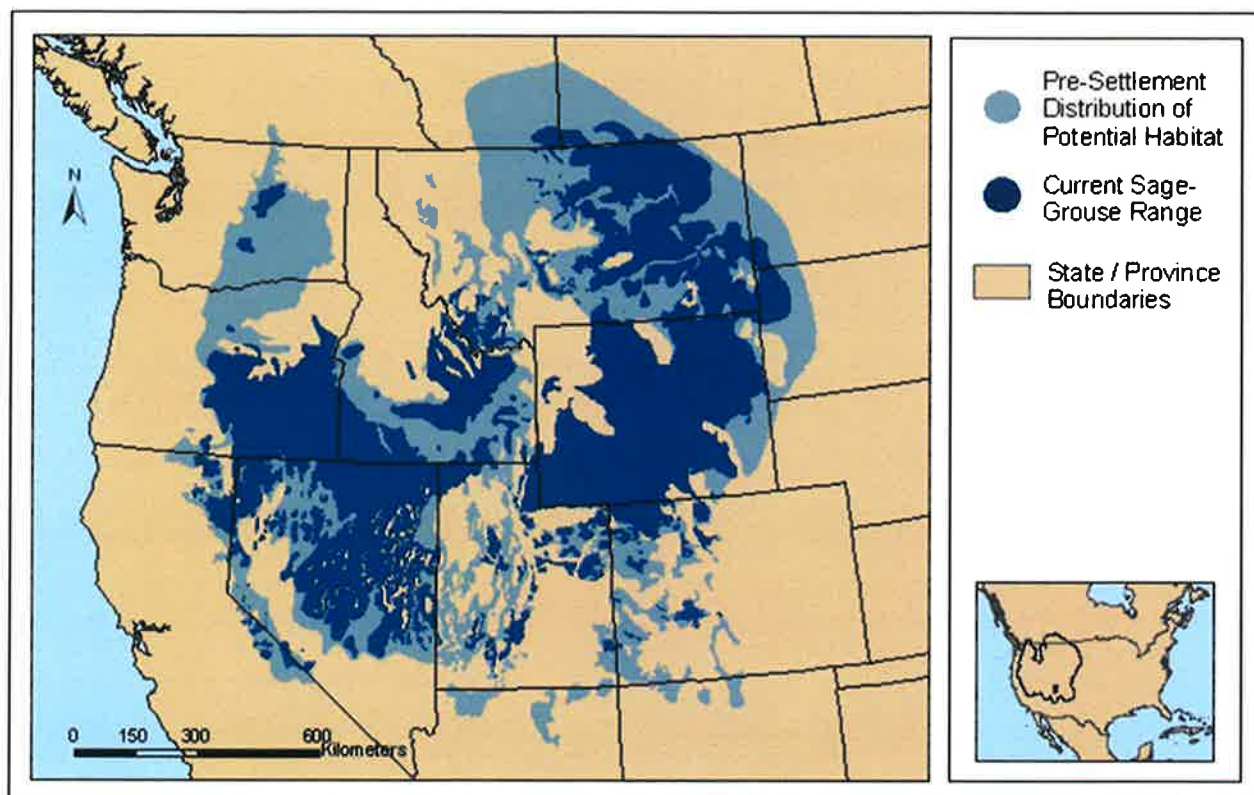
In many areas of the country, habitat conservation and wetland banking are the preferred options to offset impacts to listed species and stream, riparian and wetland habitat that is protected pursuant to the Clean Water Act. Banks undergo extensive federal review prior to being approved and are the subject of rigorous federal permitting protocols as required pursuant to the 2003 USFWS guidance. In the case of the SRC Sage-Grouse Bank, this review and approval process included intense evaluation by a Conservation Banking

Review Team (CBRT), which was empaneled by USFWS and consisted of representatives from USFWS, BLM, U.S. Department of Agriculture – Natural Resources Conservation Service, Wyoming Office of State Lands and Investments, Wyoming Game and Fish Department and Wyoming Department of Environmental Quality. USFWS also received significant guidance from its federal Solicitor's Office leading up to the final approval of the SRC Sage-Grouse Bank.

In its approval of the SRC Sage-Grouse Bank, the CBRT agreed to a service area (the geographic area(s) within which impacts to sage-grouse that occur may be mitigated or compensated through credits from the SRC Sage-Grouse Bank) that covers the entire range of sage-grouse habitat in Wyoming. Pathfinder Ranches' approved service area is depicted on the map below and is identified as Exhibit H-1 to our Conservation Bank Agreement:



Beyond the statewide service area set forth in Exhibit H-1, Pathfinder Ranches has also been approved for a much larger secondary service area, which includes the current range of the Greater sage-grouse, where federal and/or state regulators in the other ten states with sage-grouse habitat approve the use of Pathfinder Ranches credits. The secondary service area encompasses the dark blue area set forth on the following map and can be found in Exhibit H-2 of the Conservation Bank Agreement:



Pathfinder Ranches and its clients have been repeatedly reassured by state and federal agencies that its statewide service area will be respected. State and federal agencies have agreed that it is not their role to advocate for or against any mitigation provider but instead to analyze appropriate mitigation options, including banks permitted pursuant to the 2003 USFWS guidance with a service area that covers the area being impacted by development. Pathfinder will vigorously defend its (and any other certified credit provider's) ability to transact and transfer credits for use anywhere in its USFWS and CBRT approved service area.

To support its approval of a statewide service area for Pathfinder Ranches, USFWS relied on empirical data and widely used Resource Selection Function modeling. By pairing expansive vegetation data sets (2-meter hyperspectral imagery that examines Greater sage-grouse relevant considerations for all Pathfinder Ranches banked and adjacent land consistent with *Stiver et al*) and robust sage-grouse collaring data, Pathfinder Ranches was able to clearly demonstrate and validate the value of its habitat to the species. Pathfinder Ranches' credit development methodology was subjected to peer review and published in the journal *Rangeland Ecology & Management*.<sup>3</sup>

In addition to the scientific rigor demanded by USFWS and the CBRT to support their approval of the SRC Sage-Grouse Bank and a statewide service area, Pathfinder Ranches was also required to commit to long-term monitoring, reporting, bank management (including adaptive management) and financial and other assurances to meet USFWS, State of Wyoming, BLM and Forest Service requirements for durability, additionality and overall credit security.

Therefore, any criteria, preference or requirement that specifies that mitigation must be located within the county, BLM field office or region as the impact is wholly indefensible. Including any reference to a proximity requirement or preference into the revised Executive Order would be arbitrary, capricious and contrary to the state-approved SRC Sage-Grouse Bank Agreement, law, policy and science. Any such provision that is considered for inclusion should be qualified to fully sanction the use of conservation credits (certified pursuant to the Framework pursuant to the 2003 federal banking guidance) that are supported by a service area that encompasses the project area. To arbitrarily constrain the areas from which the proponent can secure Wyoming-certified credit potentially subjects them to a captive market dynamic (assuming there is a Wyoming-certified conservation credit provider in the area) and extreme costs while not affording the proponent adequate control over its ability to defend its project approval and adequately limit its future liability.

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<sup>3</sup> *Rangeland Ecology & Management* 71 (2018) 149–158

*Debit Calculation and Credit Use*

While credit certification is currently on hold in Wyoming, oil and gas, coal, pipeline, powerline, highway construction, wind and solar projects continue to move forward. In the absence of clear guidance and direction regarding the debit calculation methodology and the acceptance of approved credits, this economic activity could grind to a halt. As such, Pathfinder Ranches suggests that the Executive Order revisions include explicit direction that the section of the Framework entitled "DEBITS FOR IMPACTS TO GREATER SAGE-GROUSE" remains in full effect, including the debit calculation methodologies contained in Table 1 and Table 2.

Further, the Executive Order should clearly state that any credits that are already approved for use and/or that have been sold to developers can continue to be used, sold or otherwise transacted, even during the moratorium tied to state-level credit certification. Absent direct language in the Executive Order to this effect, a clear and unequivocal statement to these effects should be released to reassure developers and ensure that federal and state agencies understand how projects that would otherwise require compensatory mitigation should be reviewed in the interim.

To conclude, Pathfinder Ranches appreciates the opportunity to provide comments on your review and potential revision of Executive Order 2015-4, 2017-2, 2018-3 and the Framework. We are extremely grateful for your dedication not only to sage-grouse conservation, but to maintaining the important balance between such conservation and economic development in our state and ensuring that the sage-grouse is not listed under the ESA.

Kind regards,

  
Ryan M. Lance  
President





WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Wyoming Sage-Grouse Executive Order Comments - Peabody Energy

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**Cox, Kimberly** <KCox@peabodyenergy.com>  
To: "wgfd.hpp@wyo.gov" <wgfd.hpp@wyo.gov>

Wed, May 1, 2019 at 3:25 PM

To whom this may concern,

Attached please find Peabody Energy comments on the Wyoming Sage-Grouse Executive Order.

Thank you for the opportunity to comment.

Kim Cox

### Kimberly Cox

Environmental Engineer

#### Peabody

Caller Box 3034 | Gillette, WY 82717

[2298 Bishop Road | Gillette, WY 82718](#)

Phone: (307) 687-6825 | Fax: (307) 687-6837

[kcox@peabodyenergy.com](mailto:kcox@peabodyenergy.com)



**SGEO\_comments\_190501.pdf**  
2405K



Peabody Energy  
Caller Box 3034  
Gillette, Wyoming 82717-3034

May 1, 2019

The Honorable Mark Gordon  
Governor of Wyoming  
Idelman Mansion  
2323 Carey Avenue  
Cheyenne, Wyoming 82002-0010  
[wqfd.hpp@wyo.gov](mailto:wqfd.hpp@wyo.gov)

**RE: Comments on the Wyoming Sage-Grouse Executive Order**

Dear Governor Gordon:

Peabody is pleased to submit the following comments in response to your request to update the Wyoming Sage-Grouse Executive Order (SGEO). Peabody operates three surface coal mines in the Powder River Basin and has been engaged with the Wyoming Game and Fish Department, the Sage Grouse Implementation Team, and the Wyoming Department of Environmental Quality for many years on Greater Sage-grouse issues. Peabody is also a charter member of the Thunder Basin Grassland Prairie Ecosystem Association. As a result habitat protection, conservation and reclamation have been an integral component of our business for nearly two decades.

The Wyoming SGEO is the leading guidance document which provides a stakeholder-led, landscape-based approach for sage-grouse management. Wyoming's steady involvement and guidance given to private and Federal Land Management Agencies is essential for the continued coordination of conservation efforts for the Greater sage-grouse. We feel that successful conservation will be dependent on this coordination and that the federal management plans must remain consistent with the Wyoming's SGEO. For that reason alone, the SGEO needs to remain in place and remain the strong guidance document it has always been.

The surface coal mining industry in Wyoming is subject to some of the most rigorous regulations in the country, including those portions of the program designed to protect wildlife. This program exists in state laws and regulations, some of which were developed to secure primacy for the State under SMCRA, and some which existed even before SMCRA existed. In order to ensure that the existing programs for wildlife in this regulatory program are not overlooked as sage-grouse protection evolves, we request that the SGEO memorialize the

importance of this regulatory program. In particular, the SGEO should recognize the protections afforded to sage-grouse and the certainty this regulatory program offers to the industry and the State of Wyoming. We recommend the following language be added to the SGEO:

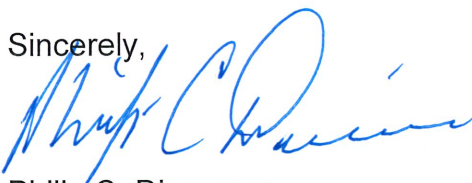
*"The State of Wyoming has regulatory primacy over coal mines in Wyoming. The State's regulatory program is sufficient to protect the greater sage-grouse and its habitat, and to provide regulatory certainty to the State and the surface coal mining industry."*

Regarding compensatory mitigation, the only current option in Wyoming is for an operator to purchase credits from a habitat credit source. Yet the regulatory program for surface coal mines has resulted in reclamation of wildlife habitat that is recognized as world class. Wyoming coal mine reclamation has received numerous awards from state, federal and private organizations because of the success that has been achieved in reclaiming wildlife habitat. Moreover, the nature of surface coal mining ensures that the reclamation of wildlife habitat is accomplished in the same area where the disturbances have taken place. This ensures that recovery efforts for sage-grouse will occur statewide and not only where habitat banks are located.

The mitigation banking and credit system needs further development of credit providers. The State and SGIT are aware of this fact and are working to fill any voids in mitigation opportunities that may exist. We request that the SGEO acknowledge this as one of the State's conservation objectives. Mitigation requirements should be prioritized in the areas where the disturbances and loss of habitat are taking place. The SGEO can recognize that the Wyoming coal mine regulatory program ensures that this conservation objective is met on mined land reclamation.

Our final point is that Wyoming is best served by a program which balances responsible development with regulatory oversight and is sensitive to the myriad landscapes that support sage-grouse. We encourage the continuation of a strong state-level program through this Executive Order. This is in the best interest of the habitat, the sage-grouse and all Wyoming citizens, and it facilitates Wyoming's successful balance of resource management and development.

Sincerely,



Philip C. Dinsmoor  
Director, Environmental Services, PRB  
Peabody



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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**PAW Comments-WY Sage-Grouse Executive Order**

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**Esther Wagner** <esther@pawyo.org>

Wed, May 1, 2019 at 12:02 PM

To: "wgfd.hpp@wyo.gov" &lt;wgfd.hpp@wyo.gov&gt;

Cc: Bob Budd &lt;bob.budd@wyo.gov&gt;, Renny Mackay &lt;renny.mackay@wyo.gov&gt;, "beth.callaway@wyo.gov" &lt;beth.callaway@wyo.gov&gt;

Good afternoon,

Attached are the Petroleum Association of Wyoming's comments on the Wyoming Sage-Grouse Executive Order.

Please let me know if you have any questions.

Sincerely,

Esther Wagner

Esther Wagner

Vice President - Public Lands

Petroleum Association of Wyoming

Office (307) 234-5333

Cell (307) 262-4690

**PAW SGEO Comments 5-1-19.pdf**  
900K



May 1, 2019

The Honorable Mark Gordon  
Idelman Mansion  
2323 Carey Avenue  
Cheyenne, WY 82002-0010

SENT VIA EMAIL TO: [wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

Re: Wyoming Executive Order 2015-4 Greater Sage-Grouse Core Area Protection

Dear Governor Gordon:

The Petroleum Association of Wyoming (PAW) would like to thank you for the opportunity to provide proposed revisions to Wyoming Sage-Grouse Executive Order 2015-4 (EO). PAW is Wyoming's largest and oldest oil and gas organization dedicated to the betterment of the state's oil and gas industry and public welfare. PAW members, ranging from independent operators to integrated companies, account for approximately ninety percent of the natural gas and eighty percent of the crude oil produced in Wyoming.

PAW believes the Wyoming Sage-Grouse Core Area Protection Strategy is achieving the necessary balance to protect sage-grouse while allowing for economic development to occur. Industry willingly worked within the core area strategy in part because it provides regulatory certainty for operations both inside and outside of core. Placing fewer restrictions on development outside of core creates the appropriate incentives for companies and was an inherent aspect of the core area strategy when it was envisioned over a decade ago. Oftentimes companies specifically purchase interests in leases or planned projects because those areas are outside of core. Any updates to the strategy should continue to provide and enhance the proper incentives to ensure the state maintains its lead role in management of the sage grouse.

We believe the plan is working and could be further strengthened with the following revisions and clarifications to the EO:

**1. Compensatory Mitigation Credit Approval/Certification**

PAW suggests the EO authorize the use of compensatory mitigation credits approved by the US Fish and Wildlife Service (USFWS) and that such credits be automatically considered as approved by the State. Mitigation credits that have been approved by the USFWS have undergone a rigorous approval process to meet the standards of durability, suitability and additionality under federal standards. As such, PAW recommends the EO be revised to explicitly authorize the use of compensatory mitigation credits approved by the USFWS and that the debit calculation tables contained in the EO Compensatory Mitigation Framework will apply the same to both State-approved and USFWS-approved credits.

**2. Use of Compensatory Mitigation Credits for Non-core Timing Stipulation Relief**

PAW members have experienced difficulty using mitigation credits in order to receive timing stipulation relief in non-core. Timing stipulation relief provides the kind of meaningful flexibility and regulatory

certainty to operators that establishes non-core as more conducive for production. The EO should continue to support and enhance incentives like those provided by mitigation credits to secure long-term conservation benefits to Wyoming sage-grouse. Mitigation credits go through a rigorous approval process that, when approved, provide 50+ years of habitat protection through conservation easements in exchange for *temporary lek impact*.

Even beyond the benefits of mitigation credits, timing stipulation relief has a conservation value in and of itself. As PAW has consistently maintained, uninterrupted drilling reduces the disturbance associated with moving rigs while creating areas of long-term protected habitat in the State. As such, the Wyoming Game and Fish Department should be required to ensure development activities can move forward in non-core without placing excessive hurdles to uninterrupted drilling operations.

To the extent there are situations where timing stipulation relief may not be authorized, even after efforts to avoid, minimize and compensate have been made, PAW believes the EO should clarify the circumstances when this may be the case. PAW also recommends language in the EO be strengthened to provide greater assurance that uninterrupted development activities will be allowed in non-core when operators adhere to the permitting processes contained within the EO.

### **3. Maintenance Activities**

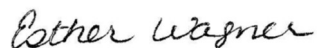
PAW members are experiencing inconsistent agency interpretations regarding the characterization of “production” and “maintenance” activities. Attachment B of the EO specifically states that “Production and maintenance activities are exempt from seasonal use stipulations.” However, a lack of consistency across regulating agencies of what constitutes “maintenance” has resulted in confusion and a lack of regulatory certainty for operators. As the agency responsible for issuing permits for oil and gas development activities in Wyoming and given the specialized knowledge of the Wyoming Oil and Gas Conservation Commission’s (WOGCC) technical staff, determinations made by the WOGCC should define the scope of activities that constitute “maintenance”.

To offer greater clarity to state and federal agencies and to provide greater certainty to PAW members, PAW recommends revising the language on Attachment B, Page 7 under the heading of “Production and Maintenance Activities” to affirm WOGCC’s primary role in determining the scope of activities that constitute maintenance and are thus exempt from seasonal use stipulations. Specifically, PAW respectfully requests consideration of the following language:

*Production and Maintenance Activities: Production and maintenance activities are exempt from seasonal use stipulations. In general, an activity that does not require approval under the rules of the Wyoming Oil and Gas Conservation Commission shall be considered an exempt “maintenance” or “production” activity. In instances where approval may be required by rule, the Wyoming Oil and Gas Conservation Commission shall retain the discretion to determine whether an activity is considered “production” or “maintenance.” The Bureau of Land Management, Wyoming Game and Fish Department, or other agency should consistently apply the interpretations of the Wyoming Oil and Gas Conservation Commission.*

Thank you for the opportunity to provide comments regarding revisions to the EO. We continue to support scientific advancements and additional tools that promote the conservation of sage-grouse and request that the interim legislative process allowing for accreditation of local compensatory mitigation credit providers be expedited. We look forward to continuing our role as a constructive partner with the State of Wyoming to ensure the long-term viability of the sage-grouse. Please feel free to contact me should you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Esther Wagner".

Esther Wagner  
Vice President – Public Lands

cc: Bob Budd, Chairman, Sage-Grouse Implementation Team



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Comments on Sage-Grouse Executive Order

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**Shannon Anderson** <sanderson@powderriverbasin.org>  
To: wgfd.hpp@wyo.gov

Wed, May 1, 2019 at 10:06 AM

Thank you for the opportunity to submit comments on behalf of the members of the Powder River Basin Resource Council. We look forward to the Governor's and the Department's review.

Shannon Anderson

Powder River Basin Resource Council

934 N. Main St., Sheridan, WY 82801

307-672-5809 cell: 307-763-0995

[sanderson@powderriverbasin.org](mailto:sanderson@powderriverbasin.org)



**2019 5-1 comments on sage-grouse EO.pdf**  
177K



May 1, 2019

The Honorable Mark Gordon  
Governor of Wyoming  
Via electronic mail to: [wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

Dear Governor Gordon,

Thank you for this opportunity to submit comments on the sage-grouse executive order. We appreciate the leadership you and Sage-Grouse Implementation Team (SGIT) Chairman Budd have shown in protecting our sage-grouse habitat and populations.

The Powder River Basin Resource Council (Resource Council) is a grassroots community conservation and family agriculture organization. Our members are highly interested in sage-grouse conservation from the standpoint of protecting wildlife populations in the state and ensuring that the sage-grouse will not become listed as threatened or endangered pursuant to the Endangered Species Act. Such a listing would negatively impact agricultural operations and could also hinder other economic activities that allow Wyoming's economy to thrive. Resource Council members live throughout the state of Wyoming, but the majority of them are rural landowners, many of whom live in a split estate situation with federally-controlled minerals underlying their lands. Resource Council members thus have a keen interest in sage-grouse management. We write these comments on their behalf.

The plight of the sage-grouse is also a story about the plight of sagebrush landscapes throughout Wyoming. Industrial development – particularly oil and gas development – has greatly increased throughout Wyoming and, with recent oil and gas leasing and permitting, is on track to keep increasing. This development has fragmented sagebrush habitat, leading to the loss of sage-grouse populations. Overall, Wyoming and its federal partners must do more to reverse the downward trend to ensure the sage-grouse – and the habitat it dwells in – remain protected into the long-term.

### **Stick with the Science**

We are concerned that the current implementation of the Executive Order elevates politics over science in permitting, leasing, and other decisions that negatively impact sage-grouse populations. We know the Governor's Office and the SGIT is well aware of the various reports and studies that demonstrate now is the time to forcefully and deliberately act if we are to prevent extirpation of local populations and possible extinction of the sage-grouse. In fact, many of these scientific reports were conducted with state participation and funding.

The science tells us to do several important things, including:

1) **Prohibiting new energy leasing in core (priority) habitat areas.** Once leased, operators have an implied right to develop. Since most core areas are already partially leased and leasing

immediately outside of core areas is also putting pressure on that core habitat, the SGIT should call for a moratorium on new federal and state oil and gas leases in core areas.

2) **Expanding buffers between leks and energy development**. The science shows that current buffers are ineffective at preventing impacts to leks and, in turn, preventing long-term local population decline. Buffers under the Executive Order should be increased both for core and non-core habitat.

3) **Requiring habitat restoration both on and offsite to minimize loss of nesting and winter habitat**. Onsite habitat restoration should be prioritized, and offsite habitat restoration and mitigation should only be used if onsite remedies are not available. Non-core habitat areas should not be turned into sacrifice zones. The science also tells us sagebrush is difficult and sometimes impossible to reclaim, and minimizing loss of habitat should be the primary goal of the Executive Order.

4) **Limiting noise and human-activity close to leks during breeding and nesting periods**. No exemptions to seasonal timing restrictions should be afforded under the Executive Order.

5) **Protecting connectivity areas to prevent isolation of sage-grouse populations**. In some cases, especially in areas with limited core habitat, connectivity between core habitat is as important as the core habitat itself. This is especially true in Northeast Wyoming.

6) **Minimizing the spread of west nile virus by limiting the use of ponds for produced water**. Produced water ponds can spread west nile virus, which is a significant threat to sage-grouse, especially in Northeast Wyoming.

7) **Creating enforceable habitat density and disturbance caps that when reached prevent new energy permitting**. Mandatory enforcement of all Executive Order habitat thresholds is critical to the long-term viability and success of the state's plan. Exceptions and exemptions will only lead to more exceptions and exemptions and ultimately a downturn in sage-grouse populations.

8) **Implementing phased development of projects over a large area of land**. For larger oil and gas projects, the Executive Order could promote phased development with reclamation requirements for habitat that need to be met before future development is allowed to proceed. For the landscape scale habitat protection necessary for the long-term viability of sage-grouse populations, phased development provides a critical opportunity.

### **Adjustments Needed for Northeast Wyoming**

Our members in Northeast Wyoming do not benefit much from the Executive Order. This is because there is a lack of designated core habitat in the Powder River Basin. According to Game & Fish Department data, only 38% of occupied leks occur in core habitat.<sup>1</sup>

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<sup>1</sup> [https://wgfd.wyo.gov/WGFD/media/content/PDF/Habitat/Sage%20Grouse/SG\\_NE\\_CONSERVPLAN.pdf](https://wgfd.wyo.gov/WGFD/media/content/PDF/Habitat/Sage%20Grouse/SG_NE_CONSERVPLAN.pdf)

Additionally, the core habitat that does exist in Northeast Wyoming is being leased and developed because habitat thresholds are not being enforced. For instance, the Converse County Oil and Gas Project DEIS provides a particularly stark picture for the core areas in Converse County. If the Converse County project moves forward in its current form, the current 5 percent disturbance cap will be exceeded in four of the core areas (Bill, Douglas, North Glenrock, and Thunder Basin), with a fifth dangerously close to the cap at 4.4%.

Our organization remains very concerned about possible sage-grouse extirpation in Northeast Wyoming, and we call on the SGIT to focus more on this region in the Executive Order and its implementation.

Thank you for your time and consideration of these comments. We look forward to the review of the Executive Order.

Sincerely,

A handwritten signature in cursive script that reads "Joyce E. Evans". The signature is written in dark ink and is positioned above the typed name.

Joyce Evans  
Chair, Powder River Basin Resource Council



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage Grouse

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**Richard Tass** <rtass@wyoming.com>  
To: wgfd.hpp@wyo.gov

Tue, Apr 30, 2019 at 10:20 PM

I recently attended a meeting of area producers concerned about livestock and sage grouse depredation.

The main discussion centered on the damage being done by coyotes and the defunding of the state predator control program a few years back. At that time the state reduced the funding to the program by 2.35 million dollars for the 2017 – 2018 biennium. The coyote problem has escalated to the degree that some of the sheep producers are being put out of business because they cannot sustain the depredation on the ewes and lambs.

The predators are also impacting the Sage Grouse population, a population that our state has remained active in keeping alive. The Johnson County Woolgrowers have been keeping track where their trappers have killed coyotes. They overlaid these kills on top of the “Leks”, the areas where the birds congregate to mate and nest. A large percentage of their kills have been in or near these mating grounds. The increasing number of coyotes in these “Leks” are causing more and more pressure on these birds.

With the reduction in funding for the predator control program, there has been a rapid increase in the coyote population with a corresponding decrease in the deer and antelope populations, not to mention the increase in losses of domestic livestock. The decrease in funding has also decreased the number of trappers available to work to control skunks and raccoons who carry rabies in and around towns. Rabies has been on the increase in some areas.

I have opposed the increase in state spending at almost every opportunity. However, I think it is very important to reinstate the funding that the state took away from the Predator Control Program 3 years ago. For the sake of our agriculture community, our wildlife and our State's well-being, I strongly support this vital program, The State Predator Control program.

Sincerely,

Richard Tass, Representative District 40



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage Grouse Comments

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**Carol Hamilton** <quarter08@mac.com>

Tue, Apr 30, 2019 at 2:21 PM

To: wgfd.hpp@wyo.gov

Dear Governor,

Common sense please.

USFS numbers project 300,000 Sage grouse on 12 million core area acres - this equals one bird for every 40 acres. Does this not suggest more pressing causes for the birds decline than habitat? Predators maybe?

There is a determination that differentiates between winter range (forage-sagebrush) and spring, summer and fall range (forage-grasses, legumes, blossome bugs etc). That is to say sagebrush in the higher elevations needs manipulation to achieve 3 or move seral stages that would create a habitat of grasses, forbes, bitter brush, mountain mahogany etc to reflect a succulent, balanced energy rich diet (Use spike or fire).

Lastly protecting every sage bush is asinine. Case in point - timber operators have historically wind-rowed snow to create snow breaks/fences to help keep roads open for access to timber stands. Lately the BLM has outlawed this practice. Result - multiple costs to plow snow off roads making many marginal sales "unfeasible". Again - a little common sense could have gone a long way in not defeating the original purpose, saving cost and waisting effort.

Richard Hamilton  
Fort Bridger, WYri



WGFD HPP <wgfd.hpp@wyo.gov>

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## Sage Chicken Comments

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**McMurry Ranch** <mcmurryranch@outlook.com>  
To: "wgfd.hpp@wyo.gov" <wgfd.hpp@wyo.gov>

Mon, Apr 29, 2019 at 7:45 PM



**Sage Chicken.docx**  
13K

April 26, 2019

Governor Mark Gordon & Fish and Game,

I would like to submit this letter in response to the comments request regarding sage chickens. Although I haven't participated in a "study" of sage chickens, I have observed them in their natural habitat for many, many years. Sage chicken were aplenty in the Eden Valley area where I was born, raised and continue to live.

My father, Vern McMurry, had approximately 100 acres of alfalfa where the Fish & Game trapped hundreds of chicken to be transplanted in Oregon, California and other places where the chickens had become extinct. In 1949, a lek study completed by Patterson, in Eden Valley, revealed greater numbers of sage grouse and habitats. At that time there were so many sage chicken, they often became our dinner after being maimed by the mowing machine. The habitat is very similar to this day, but with grand fields of alfalfa under sprinkler irrigation, surrounded by sagebrush.

The use of the 1080's (before being banned) by the sheepmen kept the coyotes at bay so they weren't as much of a threat to the chickens. BUT with the passing of the Bird Protection Act, raven numbers have multiplied. Road kill keeps this population thriving. These predatory birds are the major reason for the decimation of the sage chicken.

Sport men now days hunt more for sport than for the need to feed their family. What a challenge it would be to hunt this intelligent, willey bird!! Yes, its against federal law...so was marijuana. Let us hunt the right bird and save our sage chicken, drilling and livestock businesses.

Thank you for your consideration!

Sincerely,

Robert L. McMurry  
307.273.9616



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage Grouse Exec. Order Input

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**Rubel Vigil** <rubelvigil@yahoo.com>

Wed, May 1, 2019 at 3:34 PM

To: wgfd.hpp@wyo.gov

Please consider the following input:

Keep the management prescriptions the same. This includes management identified in the EO making up the Sage-Grouse Core Area Protection Strategy.

There is a hierarchical management approach for reducing harm to quality sage-grouse habitat – avoid harm, minimize harm, and when core-area grouse management has been met and exceeded, the operator must compensate financially for their harm. The State of Wyoming developed a document regarding the financial circumstance and that document produced on July 10, 2017 and the table produced on Oct. 28, 2018 need to be included or referenced in Governor Gordon's EO.

Include additional language on monitoring, reporting, and data collection. The state needs to clarify and account for, on a range-wide basis, their use of exceptions, waivers, modifications, and exemptions. If Wyoming knows how many exceptions are given to allow for an operator to be physically present and active during mating season, for example, they will have a better understanding of bird impacts and it will guide their future decisions for other exception requests.

Maintained language regarding landowners and land use, "It is critical that existing land uses and landowner activities continue to occur in Core Population Areas, particularly agricultural activities on private land." "Existing land uses and landowner activities deemed to have negligible or no impacts to Greater sage-grouse are exempt from review for consistency under this Executive Order."

Sent from my iPhone



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage Grouse

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**Scott Johnson** <johnsonranchwyoming@gmail.com>

Tue, Apr 30, 2019 at 1:43 PM

To: wgfd.hpp@wyo.gov

Governor Gordon, I am writing to encourage you to do everything possible to protect sage grouse and their habitat. Protecting these vital areas not only protects sage grouse but also many other animals that share the same habitat.

My wife and I moved to Wyoming a few years ago and bought a ranch on the Tongue River we are improving for wildlife. We had owned businesses for years in Kansas and my wife is a teacher. We wanted to get out west to be closer to the wildlife we love. We are conservative republicans, my wife is the Treasurer of the Sheridan County Womens Republican Party.

The older we get the more we realize how lucky we are and the more we want to protect our beautiful country and the wildlife in it for future generations.

Thanks, Scott and Candice Johnson



WGFD HPP <wgfd.hpp@wyo.gov>

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## Sage Grouse Comments

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**Sharon Shumway** <smshumway@comcast.net>

Fri, Apr 26, 2019 at 6:27 PM

Reply-To: Sharon Shumway <smshumway@comcast.net>

To: wgfd.hpp@wyo.gov

Dear Governor Mark Gordon:

Attached are our comments regarding Wyoming's sage grouse strategy.. We thank you for the opportunity to share our thoughts.

Sharon Shumway

Dan Shumway



**EPSON004.PDF**

33K

1174 Lane 9

Powell, Wyoming 82435

April 25, 2019

Re: Public Input for Sage Grouse Habitat

Dear Honorable Mark Gordon, Governor:

We appreciate the opportunity to offer input on the Sage Grouse habitat protections and the needs of agriculture. We support the effort to build a balanced sage grouse strategy.

The Powell Tribune reported that certification for captive breeding was granted to Diamond Wings Upland Game Birds. The Diamond Wings also owns the pheasant farm west of Powell.

We are neighbors on three sides of the Powell pheasant farm. Although the management of the pheasant farm seems very knowledgeable about pheasant breeding, there are some issues that need addressing prior to adding a sage grouse captive breeding program.

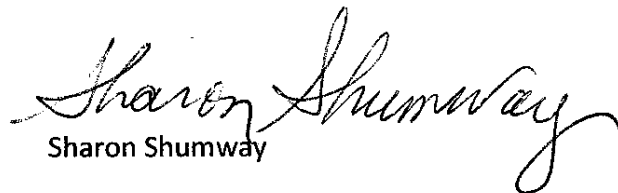
1. Provisions need to be made for the disposal of waste and the remains of birds other than in a fire area on the farm. Regularly in the evening and night, there has been smoke and a distinct offensive smell like burning feathers that permeates the area.
2. Not unfrequently, pheasants escape the pheasant farm with blinders on making them easy prey for predators. Hopefully, more would be done to protect the sage grouse. What would be the status of the sage grouse if they escaped?
3. On the pheasant farm, hunting is allowed year-round in a portion of a 40-acre area. As farmers, we are working in the fields across the fence setting water, clearing weeds, etc. while hunting is occurring. If sage grouse were allowed, hopefully it would not be close to this area.
4. The area dedicated to hunting has been left to grow noxious weeds, Russian Olive and other trees. The seeds of the weeds and trees are spread to the surrounding fields. When discussed with the local Weed and Pest Office, they said they were unable to enforce weed control because the pheasant farm does not sell agricultural products. Should the raising of pheasants and/or sage grouse be considered agricultural?

Prior to implementing captive breeding for sage grouse, both the agricultural issues and requirements for sage grouse breeding should be addressed.

Thank you for the opportunity to offer input in this matter.

Sincerely,

  
Daniel Shumway

  
Sharon Shumway



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Comments on WY Greater Sage-grouse EO

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**Skip Ambrose** <skipambrose@frontiernet.net>

Thu, Apr 11, 2019 at 1:48 PM

To: wgfd.hpp@wyo.gov

Hi,

Attached are my comments and suggestions on the Wyoming Greater Sage-grouse Executive Order 2015-4. I appreciate the opportunity to provide input.

I also appreciate the effort Wyoming is making in addressing potential noise impacts to Greater Sage-grouse. Wyoming is a leader in this effort.

Thank you,

Skip Ambrose

Western Bioacoustics, Inc.

435-220-0129

[skipambrose@frontiernet.net](mailto:skipambrose@frontiernet.net)

**WY Grouse EO Comments Ambrose 20190411.docx**

54K

Date: April 11, 2019

To: wgd.hpp@wyo.gov

From: Skip Ambrose, Western Bioacoustics, Inc. (435-220-0129)

Subject: Comments on Wyoming Greater Sage-Grouse Executive Order

I am writing to comment on Wyoming Greater Sage-Grouse Executive Order 2015-4 (EO). I have studied sound levels at Greater Sage-grouse leks in Wyoming since 2013, and offer the following recommendations to improve and clarify the current EO.

The State of Wyoming has been a leader in addressing potential acoustic impacts to Greater Sage-grouse, using a “not to exceed 10 dBA over baseline” approach. However, the current EO does not specify how to establish baseline sound level, and this is critical when using the 10 dBA over baseline approach. The baseline sound level ( $L_{90}$ ) in sagebrush in rural, undeveloped WY averaged 14 dBA at nine sites. 10 dBA over this level = 24 dBA, which was the critical level for lek count trends in the PAPA. Our PAPA analysis confirms that the WY management approach is appropriate and should protect Greater Sage-grouse from anthropogenic sounds, assuming an accurate baseline is used.

It is important than any revision to the current EO clarify and define how to establish baseline sound levels, against which potential acoustic impacts are evaluated. In most countries, states, and large cities that have standards for establishing baseline sound levels (also referred to as background or residual sound level), the  $L_{90}$  metric is almost always used. For example, Section 36-1 of Denver, CO, city ordinances states: “Background sound level means the A-weighted sound pressure level of all sound associated with a given environment, exceeded ninety (90) percent of the time ( $L_{90}$ ) measured and being a composite of sounds from many sources during the period of observation while the noise level from the noise source of interest is not present.” Other such regulations or ordinances are similar. The  $L_{90}$  metric attempts to remove the sound source of interest, and in the case of Greater Sage-grouse, that is all anthropogenic sounds.

Suggested changes to the WY EO for managing potential acoustic impacts to Greater Sage-grouse:

#### **Noise**

New project noise levels, either individual or cumulative (as measured by  $L_{50A,0-24}$ ), should not exceed 10 decibels above baseline noise at the perimeter of a lek during the breeding season (March 1 to May 15). The baseline sound level shall be established by using  $L_{90A,0-24}$  metric; this measurement must be done prior to any development, or, if not possible, in a nearby, similar area without development. The monitoring protocol now available from the WGFD shall be used to measure and report sound levels.

Thanks for the opportunity to make these comments, and congratulations to Wyoming for being a leader in this effort. Feel free to contact me if you have any questions. A short summary of our Wyoming sound level analyses follow.

### *Background*

Since 2013, we have been measuring sound levels at Greater Sage-grouse leks in Wyoming. Sound levels were measured at 20 leks in the Pinedale Anticline Project Area (PAPA), and at 6 leks outside the PAPA. Measurements were made in 4 of Wyoming's 8 Sage-grouse Working Group Areas. I have collected over 17,000 hours of acoustic data at these 26 locations. These data have been analyzed and a draft paper is currently undergoing review for publication. The statements below are from sections of that draft paper.

### *Results*

In rural, undeveloped areas, away from oil and gas development, baseline sound levels ( $L_{90}$ ) averaged 14 dBA at nine locations, and current existing sound levels ( $L_{50}$ ) averaged 19 dBA. These levels are lower than previously reported in WY, but this was due primarily because we used more sensitive sound level meters than in previous studies (higher sensitivity allows measurement of lower sound levels).

In the PAPA, sound levels at leks varied due to the number of well pads nearby ( $R^2 = 0.546$ ,  $P = <0.001$ ) and the distance from the lek to the nearest well pad ( $L_{50}$  dBA:  $R^2 = 0.781$ ,  $P \leq 0.001$ , quadratic). Sound levels at leks were highest during drilling activities (mean  $L_{50} = 61$  dBA @ 100 m), and lower post-drilling, varying with different types of activity, number of wells on a pad, etc. Sounds from drilling and production activities were steady, consistent sounds, occurring 24 hours/day, 7 days/week. Measurements in the PAPA revealed that typical post-drilling sound levels attenuated to near baseline levels at distances greater than about 3400 m ( $R^2 = 0.827$ ) (Figure 1).

We compared trends of lek counts from 2000-2018 with number of pads within 3 km, sound levels, distance to lek, and habitat loss within 3 km. Sound levels at leks were correlated with trends ( $R^2 = 0.291$ ,  $P = 0.010$ ). At leks where  $L_{50} > 24$  dBA ( $n=13$ ), mean trend was -0.237, and 85% had declining trends and 15% had stable/increasing trends. At leks where  $L_{50} < 24$  dBA ( $n=9$ ), mean trend was +0.006, and 89% had stable or increasing trends and 11% had declining trends (Figure 2). At leks  $<1560$  m from a well pad ( $n=12$ ), 100% had declining trends, and at leks  $>1560$  m from a well pad ( $n=10$ ), 83% had stable/increasing trends (Figure 3). The percent habitat disturbed within 3200 m from a lek was also correlated with trend ( $R^2 = 0.413$ ,  $P = 0.001$ ). Our analysis revealed that although sounds from gas field activities influenced sound levels at leks out to about 3200 m, lek trends were not significantly influenced at  $L_{50} < 24$  dBA and at distances  $>1560$  m.

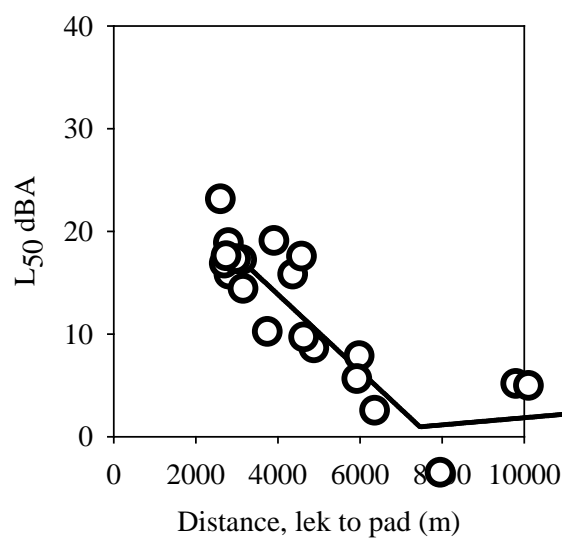


Figure 1. L<sub>50</sub> dBA compared to distance between lek and well pad.

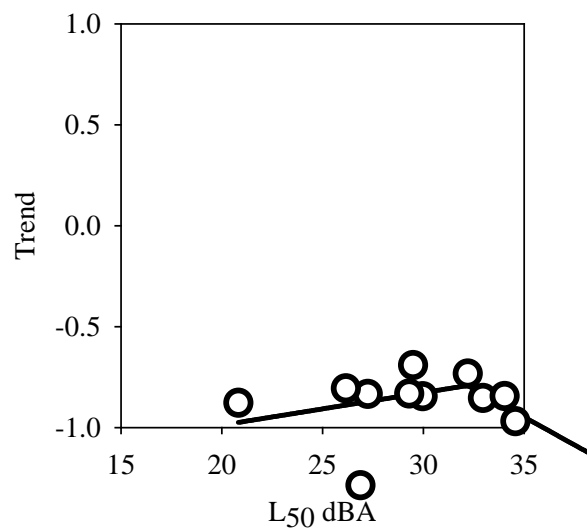


Figure 2. L<sub>50</sub> dBA (all hours) compared to trends at leks.

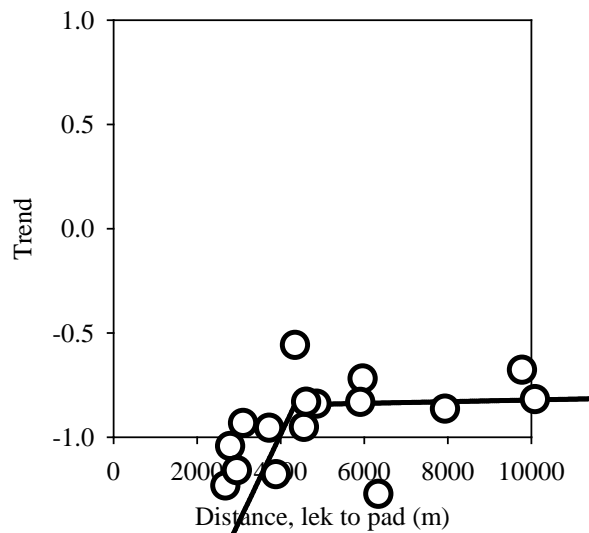


Figure 3. Distance (lek to nearest pad) compared to trends at leks.

All four variables were significantly correlated with trend, but multicollinearity was also present, that is, the independent variables (number of pads, sound, distance and habitat loss) were highly correlated with each other, often more than with the dependent variable (trend). This made assessing relative importance of each difficult. We used a path analysis technique called piecewise structural equation modeling (SEM) to evaluate the potential effects of number of pads within 3 km of a lek, the percent area disturbed within 3 km of a lek, the distance from a lek to the nearest well pad, and sound level at the lek ( $L_{50A,0-24}$ ) on sage-grouse trends. SEM provides a way to evaluate potentially causal relationships between variables, and provides both direct and indirect effects of covariates on each other and ultimately to the response of interest (trend). We used a radius of 3 km around leks because noise from well pads generally attenuates to background levels beyond about 3 km. We found that the relationship between the number of well pads to trend was strongest when corrected for sound, more so than for distance or habitat, indicating that sounds from gas field activities have a significant influence on lek count trends, as important or more so than other variables for which we had data.

#### *Time Period for Impact Assessment*

We reviewed relationships between all sound level metrics and trends for three time periods, all hours (0000-2400), daytime (0800-1800), and lekking hours (1800-0800). We found that all time periods were correlated with trends at leks; however, the time period 0000-2400 had the overall strongest relationship with trend (differences were slight and not significantly different). Although sound levels during lekking hours was the lowest of all three time periods, the strength of the relationship of all hours with trend leads us to believe that gas field sounds probably impact female grouse and chick communications as well as impacting lekking behavior. Both potential acoustic impacts are important, and we recommend that the  $L_{90}$  and  $L_{50}$  metrics for all hours be used in managing acoustic impacts to Greater Sage-grouse.

### *Discussion*

Sound levels above which negative impacts generally occur ( $L_{50} = 24$  dBA) suggest that Wyoming's current management practice to limit anthropogenic sounds to  $<10$  dBA over baseline ( $L_{90} = 14$  dBA) is appropriate. However, it is essential that an accurate baseline be used.



WGFD HPP <wgfd.hpp@wyo.gov>

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## Sage Grouse Executive Order comments

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**Roger Cox** <cox.saratoga@gmail.com>  
To: wgfd.hpp@wyo.gov  
Cc: Teal Cufaude <teal.cufaude@wyo.gov>

Tue, Apr 23, 2019 at 8:14 AM

Attached are comments from the South Central Local Work Group concerning the Governor's executive order.



Virus-free. [www.avg.com](http://www.avg.com)



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**Sagegrouse EO comments.pdf**  
342K

April 22, 2019

To: The Honorable Governor Mark Gordon

From: South Central Sage-Grouse Local Working Group

Subject: **Sage-Grouse Executive Order 2015-4**

The South Central Sage-Grouse Local Working Group (SCLWG) appreciated the opportunity to review the Sage-Grouse Executive Order 2015-4 and provide comments that could aid in updating this important policy. The SCLWG is composed of citizens representing agriculture, industry, conservation, sportsmen, conservation districts, federal land management agencies, and state wildlife agencies within the South Central Conservation Area. In March 2019, SCLWG met to discuss the existing Executive Order. SCLWG supports the existing Executive Order and the primary components of the State's Core Area Strategy and the protections it provides Greater Sage-grouse in Wyoming. SCLWG has identified several elements of the existing Executive Order that could be improved upon or clarified:

1. Compensatory Mitigation (Executive Order 2015-4, Attachment H, Page 1): SCLWG supports adding Compensatory Mitigation Framework to the Executive Order. SCLWG would like to see the Compensatory Mitigation section clarified in the Executive Order. SCLWG would support clarifying what a "credit" is. SCLWG is interested in additional information on how conservation banks should benefit sage-grouse.
2. SCLWG supports adding clarification in the Executive Order on non-functional habitat within core. SCLWG has at least one example of an area within core that is considered 100% disturbed. The existing Executive Order leaves many questions on how federal land management agencies and industry should appropriately deal with these areas. Although there is one example locally for SCLWG, the preference would be that these non-functional habitats be clarified at a statewide level within the Executive Order.

SCLWG recognizes the effort put into defining seasonal use/ timing stipulations and would prefer that no changes be made to the seasonal use/timing stipulations in the existing Executive Order. Again SCLWG appreciates the opportunity to comment on the existing Executive Order. Thank you for considering SCLWG's comments.



Roger Cox  
South Central Sage-Grouse Local Working Group  
Chairman



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Southwest Local Working Group Comments

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**Mark Zornes** <mark.zornes@wyo.gov>  
To: WGFD HPP <wgfd.hpp@wyo.gov>

Wed, May 1, 2019 at 10:58 AM

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Mark Zornes, Certifiable Wildlife Biologist  
Wildlife Management Coordinator  
Green River Region  
Wyoming Game and Fish Department

*"I feel a lot more like I do right now than I did a while ago"-----Redfern Evans 1969*

E-Mail to and from me, in connection with the transaction  
of public business, is subject to the Wyoming Public Records  
Act and may be disclosed to third parties.



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**SWSGWG EO Comments.docx**  
25K

April 30, 2019

The Honorable Mark Gordon  
Governor, State of Wyoming  
Idelman Mansion  
2323 Carey Ave.  
Cheyenne, WY 82002-0010

Dear Governor Gordon,

Thank you for the opportunity to review and offer recommendations to the Governor's Executive Order (EO) 2015-4 concerning the conservation of greater sage-grouse (GSG) and their habitats. We, the members of the Southwest Local Sage-grouse Working Group (representing primarily the area of Lincoln, Sweetwater, and Uinta counties), offer the following for your consideration:

1. **HUNTING** – The current EO does not address the issue of hunting or the fact greater sage-grouse are an important upland game species in Wyoming. We request this shortfall be addressed through the following:
  - Page 6 of 7 (Now Therefore Statements) - This Working Group recommends a new statement #24 be added: "The State of Wyoming will continue to support well-regulated, sustainable hunting of viable sage-grouse populations. Sage-grouse hunting creates a constituency of sage-grouse advocates who are interested in seeing the needs of grouse populations are met and license fees provide revenue for management. The US Fish and Wildlife Service did not view regulated hunting as a significant threat to sage-grouse in their assessment of threats in the 2015 not-warranted listing decision."
  - "Request that clarification, and a statement in the EO be added, to define how the hunting of greater sage-grouse is classified. GSG hunting may be defined as an exempt "de minimus" activity described on page 5 of 16, Attachment B under "Exempt Activities" and Attachment C", and/or as an "existing activity" described under Item #2 Page 4 of 7. At this time, no reference to GSG hunting is made within the EO."
2. **MONITORING, DATA, and REPORTING** - We ask the EO clarify where SGEO monitoring, data, analysis, and reporting metrics may be available to the public for their use. We recommend this information be located at a central location.
  - We ask the EO clarify where SGEO monitoring, data, analysis, and reporting metrics may be available to the public for their use. We recommend this information be located at a central location. At this time, the EO requires data collection and reporting under a number of statements (e.g. see a – e, below), yet those data or reports are difficult to locate by the public.
    - a. P10 of 16 Attachment B, Under Heading "Monitoring/Adaptive Response": ...which leks need to be monitored and what data should be reported by the proponent."
    - b. P6 of 7, Item #19 "...report all conservation and permitted actions occurring within GSG Core Population Areas Annually,"

- c. P6 of 7, Item #20 "...collect data to determine the condition of each Core Population Area..."
- d. P6 of 7, Item #22 "...monitor and document GSG populations and development activities..."
- e. P7 of 7 Attachment A, Under Heading "Core Population Area Monitoring and Management": "...monitor and track development and conservation activities across Core Population Areas..."

3. **MITIGATION BANKING** - We recommend the following sentence be added to the end of the last paragraph on page 1 of 1, Attachment H of EO 2015-4:

"To the greatest extent possible, strive to first apply offsite mitigation credits to the mitigation bank located nearest the area of disturbance. To foster the preservation of more localized sagebrush habitats and landscapes, the state of Wyoming will strive to develop mitigation banks throughout the state with the aim of preserving greater sage-grouse habitat throughout Wyoming."

The rationale for our requested addition is to maintain sage grouse habitat within the localized region of the development impacted leks, discouraging sacrificing important habitats in favor of another that may be located far from the disturbance. Some county governments do not support exporting sage grouse habitat to areas far removed from the area of impact while leaving the county with the development with environment impacts and reduced greater sage-grouse habitat quality.

4. **EXEMPT (DE MINIMIS) ACTIVITIES – LINEAR PROJECTS** – We recommend linear projects be added to Attachment C (De Minimis Projects)

Under Attachment C, Exempt (de minimis) Projects we request a consideration be given to adding the following:

- Linear projects (e.g., pipeline, fiber optic lines, etc.) collocated within existing road right-of ways (e.g., Interstate, Highway, County Roads) are a de minimis activity.

Therefore, a project occurring within a road right-of way (ROWs) should not require a DDCT because it is going to occur within existing disturbance. An example of this type of project would be installation of a fiber optic line within the ROW of Interstate Highway 80. The SGIT may need to discuss what size of ROW(s) apply under this de minimis activity, but we recommend that interstate, state highways, and county roads be included in this exemption. We also request that collocated pipelines following major oil and gas roads be given consideration.

5. **CAPTIVE REARED GREATER SAGE-GROUSE** - There is a long history of captive rearing of upland game bird species within this country and around the world. Often and repeatedly, this has been shown to result in failed introductions or reintroductions, and the potential for harm to existing wild birds is a real threat when captive raised birds are introduced into wild populations and native habitats. Given the potential for large scale harm to native populations, we ask the group to carefully consider the need (or lack thereof) of allowing or supporting introducing captive reared birds to any potential greater sage-grouse habitats within our state. Additionally, we vigorously oppose the notion of using the release of captive reared birds as "mitigation" for habitat impacts and reiterate the science does not support the potential for success of these activities.
6. **INVASIVE PLANTS** – We request consideration be given to strengthening the need within the EO regarding the threat and management needed to address invasive plant species (e.g.

cheatgrass or Halogeton). We request an additional "Now Therefore Statement" be inserted in page 6 of 7 such as:

- ""Control of invasive plant species should be prioritized within and adjacent to core population areas. Threats posed by invasive plants to wildlife and agricultural production are well-documented and increasing in scope and severity."

Again, we thank you for the opportunity to comment and look forward to working collaboratively in the future to maintain and conserve this iconic Wyoming species. Maintaining intact and functional habitats and populations within this state is important to us all, and for future generations of Wyoming residents.

Sincerely,

Corby McGinnis,  
Chair, Southwest Sage-grouse Local Working Group



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Please Increase Sage Grouse Protection

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**stephanie reutner** <sreutner@hotmail.com>  
To: "wgfd.hpp@wyo.gov" <wgfd.hpp@wyo.gov>

Mon, Apr 8, 2019 at 9:41 AM

Hello,

I am a 57 year resident of Wyoming and have spent the last 33 years in Jelm, not far from a historic lek. I have seen the population dramatically decrease, here in this area where there is not oil and gas development, but certainly increased human activity. PLEASE, protect and keep these birds protected from more encroachment. What a shame it would be if future generations were not afforded the true pleasure and honor of witnessing their dance! Please, THINK FORWARD! Please do not give into pressure from oil and gas exploration. I appreciate your protections to all of Wyoming's amazing wildlife and wild places!

Sincerely,

Stephanie Reutner

15 [Bugling Elk Trail](#)

Jelm, WY [82063](#)



WGFD HPP <wgfd.hpp@wyo.gov>

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## Sage grouse feedback.

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**Steven Clemens** <clemens649@bresnan.net>  
To: "wgfd.hpp@wyo.gov" <wgfd.hpp@wyo.gov>

Sat, Apr 6, 2019 at 7:52 AM

I would suggest having a 12 month season on crows, and or a small bounty on crows. Crows kill more baby birds including songbirds than cats or any other animal. Reduce the crows and the sage grouse will make a come back and so will all the other birds.

Sent from [Mail](#) for Windows 10

## BOARD OF COUNTY COMMISSIONERS



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80 WEST FLAMING GORGE WAY, SUITE 109  
GREEN RIVER, WY 82935

PH: (307-872-3890) FAX: (307-872-3992)

Wednesday, March 27, 2019

Bob Bud, Chairman  
Wyoming Sage Grouse Implementation Team  
5400 Bishop Blvd  
Cheyenne, WY 82006  
[wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

RE: Sweetwater County comments regarding suggested changes to the State of Wyoming Sage Grouse Executive Order.

Dear Bob:

Sweetwater County offers the following comments and suggested changes related to the pending update of the Sage-Grouse Executive Order:

**Compensatory Mitigation:** Sweetwater County recommends that the following statement be added to the end of the last paragraph on page 1 of 1 of Attachment H of Executive Order 2015-4:

"To the greatest extent feasible, the State of Wyoming will first apply off site mitigation credits to the mitigation bank located closest to the area of development and lek disturbance. To foster the preservation of more localized sagebrush habitats and landscapes, the state will work to develop mitigation banks in more widespread and diverse locations."

### **Rationale:**

The purpose of this amendment is to maintain and enhance sage grouse habitat within the localized area impacted by development.

Sweetwater County does not support exporting sage grouse habitat to areas far removed from the area of impact while leaving the county with the development aftermath of reduced sage grouse habitat quality.

**Golden Triangle (General Comment):** From maps and data provided by the Wyoming Game and Fish Department, it appears that the Golden Triangle is one of the areas with the highest sage grouse lek density and population numbers within the state of Wyoming (see attached map). Even though only a small portion of the Golden Triangle is located within Sweetwater County, the county encourages the Governor's office to consider additional Executive Order protections to maintain this important sage grouse resource.

Historically, similar, if not greater, sage grouse densities were found within the close vicinity of the communities of Farson and Eden, Wyoming. Local residents remember the sage grouse numbers so great that when a flock took flight it sounded like a jet airplane taking off. Some residents remembered such an abundance that they could shoot up to five sage grouse with a single shot. Sweetwater County doesn't

## BOARD OF COUNTY COMMISSIONERS

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C·O·U·N·T·Y **R**

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- **DON VAN MATRE, COMMISSIONER**
- **RANDAL M. WENDLING, COMMISSIONER**

**80 WEST FLAMING GORGE WAY, SUITE 109  
GREEN RIVER, WY 82935**

**PH: (307-872-3890) FAX: (307-872-3992)**

expect such densities to be ever returned to this level. However, like in the Golden Triangle, where world class sage population levels still exist, special management considerations are warranted.

If you have any questions, please contact me at 307-872-3897.

Sincerely,

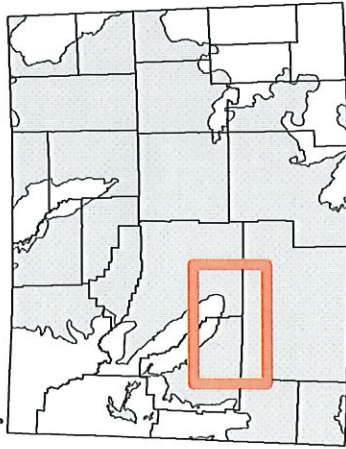


Wally J. Johnson, Chairman  
Sweetwater County Board of County Commissioners

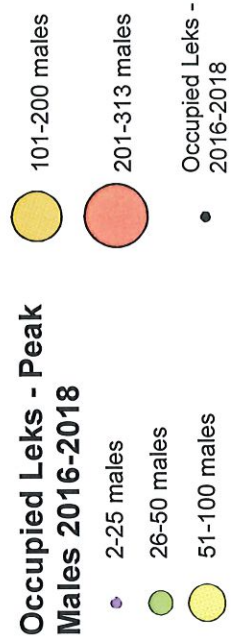
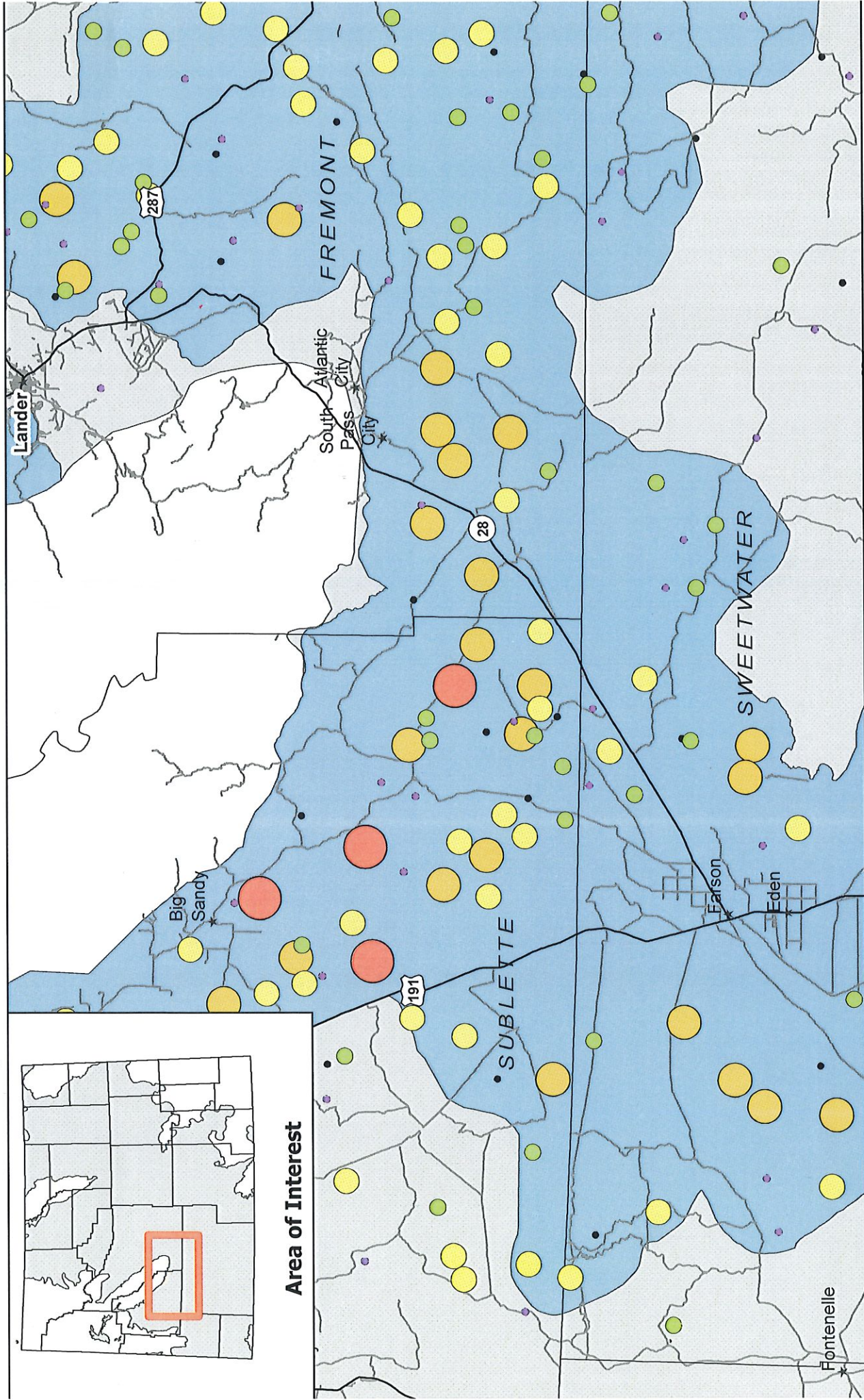
Enclosure: Map – Occupied Lek Peak Male Counts in the Golden Triangle 2016-2018, WGFD

cc: Renny MacKay, Senior Policy Advisor, Governor Mark Gordon  
Southwest Wyoming Local Sage Grouse Working Group  
Sweetwater County Board of County Commissioners  
Tim Wakefield, District Manager, BLM High Desert District  
Kimberlee Foster, Manager, BLM Rock Springs Field Office  
Eric Bingham, Land Use Director, Sweetwater County  
Kent Connelly, President, Coalition of Local Governments

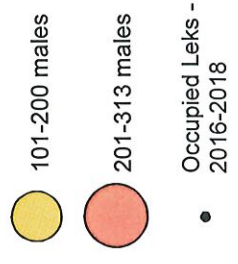
# Occupied Lek Peak Male Counts in the Golden Triangle 2016-2018



Area of Interest



Occupied Leks - Peak Males 2016-2018





WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage Grouse

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**Ted Lapis** <sally.ted@icloud.com>

Wed, Apr 3, 2019 at 11:06 AM

To: wgfd.hpp@wyo.gov

The Wyoming plan was a good solution, but the current Federal Administration can't seem to accept that fact. They are busy trying to polish apples for industry, who are unable to use enough self-discipline to avoid being hurt by their short-sited response to the bribery now so rampant in Washington, DC. I am generally disgusted with the Federal overreach, and believe that Wyoming will be hurt by scrapping our sage grouse plan.

The core sage grouse areas were located by local experts. While WG&FD was responsible for vital boots on the ground, many local businesses, environmental groups, and out-of-state specialists contributed to the plan. The people who were making decisions were well informed. WY Executive Orders 2011-5, 2013-3, and 2015-4 represented a body of knowledge that the feds are throwing out in the name of corruption, and ego mania.

I am thoroughly disgusted with this display of pure hubris. If Wyoming has the means to deny, delay, or refuse, we should. I hope Gov. Gordon can hit the pause button.

The Wyoming O&GCC had made peace with the plan, as had most in state people. The DC lobbyists, and the egotistical fools who don't know to leave good enough alone, are likely to make a big mess.

Sincerely,

Ted Lapis (307) 752-5097



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## TRCP and NAGP Comments of Wyoming's Sage grouse Executive Order

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**Ed Arnett** <earnett@trcp.org>

Wed, May 1, 2019 at 1:20 PM

To: "wgfd.hpp@wyo.gov" &lt;wgfd.hpp@wyo.gov&gt;

Cc: "beth.callaway@wyo.gov" &lt;beth.callaway@wyo.gov&gt;, "Renny MacKay (renny.mackay@wyo.gov)" &lt;renny.mackay@wyo.gov&gt;, "Bob Budd (Bob.budd@wyo.gov)" &lt;Bob.budd@wyo.gov&gt;, "Brian.Nesvik@wyo.gov" &lt;Brian.Nesvik@wyo.gov&gt;, "angela.bruce@wyo.gov" &lt;angela.bruce@wyo.gov&gt;, "mrugwell@blm.gov" &lt;mrugwell@blm.gov&gt;, Steve Belinda &lt;sbelinda@beartoothstrategies.com&gt;

Greetings,

On behalf of the Theodore Roosevelt Conservation Partnership and the North American Grouse Partnership, please accept our comments on Wyoming's Sage Grouse Executive Order, per the request of Governor Mark Gordon. Please contact myself or Steve Belinda if you have any questions. Thanks you and we looking forward to continuing to work with the State on sage-grouse conservation and management.

Best regards,

**Edward B. Arnett, Ph.D.**

**Certified Wildlife Biologist®**

**Chief Scientist**

**Theodore Roosevelt Conservation Partnership**

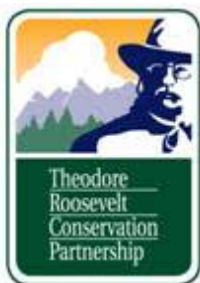
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**TRCP Comments on WY Sage Grouse Executive Order 5-1-2019.pdf**

184K

May 1, 2019

The Honorable Mark Gordon, Governor  
Idelman Mansion  
2323 Carey Ave.  
Cheyenne, WY 82002-0010

Also delivered via email to [wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

**RE: TRCP and NAGP Comments on Wyoming's Sage Grouse Executive Order**

Dear Governor Gordon,

On behalf of the Theodore Roosevelt Conservation Partnership (TRCP) and the North American Grouse Partnership (NAGP) we appreciate this opportunity to provide feedback on Wyoming's Sage Grouse Executive Order (EO) you requested from the public. The TRCP is a national 501(c)(3) non-profit organization that works with 58 partner groups and our Corporate Council members to guarantee all Americans quality places to hunt and fish. The NAGP is a 501(c)(3) non-profit organization that advocates for all 12 North American grouse species and their habitats by ensuring that grouse conservation is guided by science, public policies are beneficial to grouse and that on-the-ground management of lands lead to positive outcomes for grouse.

Our groups have greatly appreciated the leadership from former Governors Freudenthal and Mead, and your continued leadership on state management approaches to sage-grouse conservation. Indeed, Wyoming's leadership was instrumental in achieving the not-warranted decision by the U.S. Fish and Wildlife Service (USFWS) for the range-wide population of sage grouse in 2015. We also commend the leadership and commitments of the Wyoming Game and Fish Department (WGFD) and Wyoming's Sage Grouse Implementation Team (SGIT) members.

We have long supported Wyoming's general approach to conservation of sage-grouse but also believe that no plan is perfect, and assessment and adjustments are warranted to ensure effectiveness over time. As such, we offer the following comments in relation to the current management situation and future of sage-grouse in Wyoming. We have focused on five major areas of concern and opportunity for improvement, and also provide a few general comments for consideration.

**Prioritization of Development**

Prioritization of oil and gas leasing and development outside of core habitats has all but been discontinued in practice by the BLM. The TRCP, along with many other sporting, conservation and environmental groups, has expressed our increased concern regarding the current exponential rate of leasing in priority sage-grouse habitat, particularly on federal lands. We appreciate the fact that leasing does not equate to development per se, and that the state EO and BLM plans require stipulations and disturbance caps on development. However, the current rate of leasing and potential development simply does not make good sense and especially given that the EO explicitly states on page 5, #13 that "... all efforts to encourage, enhance, and prioritize development outside of Core Population Areas shall be made." We do not believe the current rate of leasing and ultimately development in core habitat – even with stipulations – meets the spirit, intent and actual direction (i.e. "shall") of the EO, nor with the original intent of the BLM RMPs that led to the not-warranted decision in 2015.

Part of our concern stems from the study by Copeland et al. (2013) that found, under the assumptions of their model, that even with a conservation strategy that includes the core area policy and \$250 million in

targeted easements, habitat is still lost annually and through time (on average, 9-15%; 95% CI: 3-32%) in the state. As such, the core area strategy represents a minimization approach yielding loss of habitat none-the-less. This is concerning, as the core area strategy was intended to conserve the best remaining habitat that accounted for approximately 80% of the remaining sage grouse. While the Copeland et al. (2013) study is a model of projected development build-out based on numerous assumptions, we simply are not aware of an alternate data set or model refuting their predictions - nor have these predictions been thoroughly tested, leaving considerable uncertainty regarding effectiveness of the EO implementation. Copeland et al. (2013) did note that early evidence, based on a 40% reduction in leased acres inside core habitat, suggested that the Wyoming EO implementation was reducing fragmentation. But this study was published under a different leasing scenario than experienced today. Our point here centers on how allowing the extent of continued leasing and development in all core habitat can lead to even a no-net-loss of habitat, let alone a stabilization or increase. We would point out that a core habitat conservation strategy essentially conserves the same or less amount of habitat (Copeland et al. 2013) for about 3/4 - at most - of the population of sage-grouse that was determined to be warranted for ESA protections in 2010. Without adequate and effective mitigation of impacts to habitat from development to at least a no-net-loss standard coupled with easements highlighted by Copeland et al. (2013) and additional restoration to increase the carrying capacity of the sagebrush ecosystem more broadly, we believe steady loss of habitat overtime is inevitable.

The current leasing approach by DOI seemingly puts undue onus on the states to request deferrals when perhaps some parcels should never have been offered in the first place. The current approach assumes that development with stipulations indeed will conserve enough habitat to thwart future population declines and, thus, a need to list the species. We remain unconvinced this assumption is valid, in part because we have not seen any recent empirical evidence or reporting on implementation of the EO (see below). Prioritizing leasing away from core habitat and staging leasing and development through space and time - as originally intended in the 2015 plans, and we believe in the EO - seemingly is critical to allow time for restoration efforts to increase carrying capacity of the overall sagebrush ecosystem to manifest. Indeed, research published since 2015 corroborates the negative relationships between oil and gas development and sage-grouse populations, behaviors and use of habitat (Hanser et al. 2018:13). Hanser et al's findings strengthen the importance of collectively maintaining management approaches established for energy development in the 2015 plans for core habitat and supporting prioritization away from and staging development within and near these habitats.

**Recommendation:** We suggest that the State work with the Department of Interior and BLM to develop a state-wide master develop plan that prioritizes leasing and development away from core habitat as originally designed and intended before the 2015 listing decision and recent amendments to federal plans, at least until it can be demonstrated that habitat loss is stabilized and carrying capacity of the range is increased through mitigation and restoration (discussed below). We also suggest the SGIT explore how the Density-Disturbance tool could be used to better inform such a broader strategy for future leasing and other development permitting.

### **Mitigation**

Offsetting impacts to sage-grouse habitat is fundamental to the conservation of the species and ensuring at least a no-net-loss of habitat over time. Mitigation was a critical feature of both state and federal plans that led to the 2015 not-warranted decision. However, the recent shift by DOI on mitigation policy and current direction that disallows requiring compensatory mitigation has raised concerns about loss of habitat on federal lands. The new direction from DOI on mitigation does allow for accepting voluntary compensatory mitigation offered by developers or deference to state plans, which we support if a states' plan meets needed criteria to ensure at least a no-net-loss standard of functional habitat plus accounting for uncertainty.

The EO emphasizes the mitigation hierarchy and “avoidance” (also, Attachment A, page 5) but we question how this now relates to the current leasing rate DOI has embraced and the onus it puts on the State and its ability to utilize the first step of the mitigation hierarchy. Also, as we understand the current WY mitigation approach, no compensatory mitigation is required if the density-disturbance cap is below the 5% threshold (implied in the EO on page 5, #7 and Attachment B, page 4 and elsewhere). If true, this approach reflects a minimization strategy yielding continued loss of habitat over space and time that may ultimately lead to population declines. Furthermore, we are not aware of any empirical evidence supporting this effectiveness of the current mitigation approach being employed.

The amended federal plans for Wyoming (Amended MD SSS 4 [Casper, Kemmerer, Newcastle, Pinedale, Rawlins, Rock Springs]; New Management Decision 2 [Buffalo, Cody, Lander, Worland] state that the BLM will:

“...before authorizing third-party actions that result in habitat loss and degradation, the BLM will complete the following steps, in alignment with the Governor of Wyoming’s Executive Order 2015- 4 (July 29, 2015):

1. Work jointly with the WGFD to evaluate projects and recommend mitigation in the form of avoidance and minimization.
2. The WGFD will determine if the State requires or recommends any additional mitigation – including compensatory mitigation – under State regulations, policies, or programs related to the conservation of Greater Sage-Grouse.
3. Incorporate state required or recommended mitigation into the BLM’s NEPA decision-making process, if the WGFD determines that compensatory mitigation is required to address impacts to Greater Sage-Grouse habitat as a part of State policy or authorization, or if a proponent voluntarily offers mitigation.
4. Analyze whether the compensatory mitigation (deferring to the appropriate State authority to quantify habitat offsets, durability, and other aspects used to determine the recommended compensatory mitigation action):
  - achieves measurable outcomes for Greater Sage-Grouse habitat function on a landscape scale as determined by WGFD that are at least equal to the lost or degraded values in accordance with the Governor of Wyoming’s Executive Order 2015-4.
  - provides benefits that are in place for at least the duration of the impacts.
  - accounts for a level of risk that the mitigation action may fail or not persist for the full duration of the impact.
5. Ensure mitigation outcomes are consistent with the State of Wyoming’s mitigation strategy and principles outlined in 2018 Approved RMPA Appendix C, The Greater Sage-Grouse Habitat Management Strategy.”

**Recommendation:** Per #4 above, we believe Wyoming would benefit from a tool that quantifies 1) actual impacts of development and other perturbations on sage-grouse habitat; and 2) needed conservation measures to fully offset both direct and indirect impacts. While complex, tools to quantify impacts and needed offset measures are more scientifically credible and defensible relative to arbitrary ratios not directly tied to measurable conservation outcomes. We also strongly recommend a rigorous monitoring program to test the effectiveness of mitigation efforts to determine if they truly offset direct and indirect impacts.

### **Reclamation and Restoration of Habitat**

Mitigation, as discussed above, is not necessarily synonymous with habitat reclamation and restoration. Indeed, mitigation efforts attempt to offset lost habitat and function, but may not lead to broader-scale improvement of carrying capacity of the sagebrush ecosystem. We believe restoring sagebrush habitat

function and increasing carrying capacity in core, general and even current non-habitat areas is critical for long-term, sustainable conservation of sage-grouse habitat and populations. Again, the core area approach minimizes impacts and represents habitat for about 3/4 of the population that were recently warranted for ESA protections. Restoring degraded habitat to improve the overall functional carrying capacity of the sagebrush ecosystem would provide needed uplift to stabilize or perhaps increase suitable habitat – and consequently populations – and may even ameliorate development impacts in some situations.

**Recommendations:** We suggest adding to the list of “Whereas” clauses between pages 1-3 a clause that emphasizes the need to restore and reclaim habitat function to increase overall carrying capacity of the sagebrush ecosystem. We also recommend the SGIT work with scientists to identify an appropriate set of criteria and metrics for achieving improved carrying capacity of sagebrush habitats for restoration projects. Also, while we are aware that there are many ongoing restoration efforts in Wyoming by the State, NRCS and other entities, we are not aware of a framework and strategy for identifying and prioritizing areas for restoration of degraded habitats in the EO. We suggest such a framework and strategy, including responsible partners and timelines, be developed and implemented as part of a revised EO. Finally, in addition to establishing a framework for implementing broadscale sagebrush restoration projects, the State also should – if it already has not done so – develop criteria and a process for determining the when the desired condition is met and what the future management of restored habitats will be (e.g., does restored general habitat at some point become core habitat and managed as such, or will restored habitats be managed differently?).

### **Monitoring, Recording, and Reporting**

On page 6, #19 the EO states that “State agencies shall report all conservation and permitted actions occurring within Greater sage-grouse Core Population Areas annually, or more frequently, as determined necessary.” To the best of our knowledge, there has never been a report made available to the public documenting various metrics on implementation of the EO since its inception. While we are sure there are data available on many aspects of EO implementation, it is difficult for resource professionals and the public to discern not only compliance with the EO, but also its effectiveness. Compliance and effectiveness information, coupled with scientific testing of assumptions of the EO, could alleviate many, if not all, of our concerns and identify needed adjustments in an adaptive management context.

**Recommendation:** We recommend the SGIT immediately develop a plan to fund and conduct an analysis and prepare a publicly available report on EO implementation and effectiveness from 2008 to present. At minimum, such a report should address:

- habitat and sage grouse populations trends pre- and post-EO implementation;
- an analysis of density-disturbance cap values through time for each lek and its associated landscape and overall for the state in both general and core habitat;
- the number of leases issued to date that were developed and their compliance with stipulations;
- the number of leases sold, but not yet developed;
- the number of waivers, modifications and exemptions allowed, if and how mitigation was applied, and associated changes to density-disturbance values;
- quantity and quality of acres required for mitigation that have manifested under the EO, and proportions on private and public lands;
- a synthesis of easement and restoration efforts (including acreage and condition of habitat, presence of birds, etc.) implemented since 2008;
- synthesis of all research and monitoring in WY that can be used to assess effectiveness of conservation measures and stipulations in the EO; and
- research needs and priorities to test the effectiveness of EO stipulations, mitigation and

restoration implementation and assumptions.

We also suggest the SGIT consider a 3<sup>rd</sup> party, independent audit of the EO implementation compliance and mitigation program in the future and at an agreed upon interval (e.g., every 3 or 5 years). Finally, we recommend a reassessment of the Copeland et al. (2013) build-out scenario of existing leases, those sold but not yet developed, and proposed and/or potential hypothetical buildout scenarios to aid in developing a master development plan for the State.

### **Sport Hunting**

The TRCP strongly supports continued state management of sage-grouse, including continued management of the species as a game bird in a manner sustaining sport hunting opportunities. There is no evidence that currently employed harvest management strategies significantly impact sage grouse populations, and no studies have demonstrated hunting as the primary cause of reduced numbers of greater sage-grouse (Christiansen 2010). However, sage-grouse are a relatively long-lived species whose existence is more dependent on survival rates than reproductive output, warranting a more conservative approach to managing harvest relative to other species of game birds (Christiansen 2010, Connelly et al. 2010). A study from Nevada demonstrated that harvest rates <11% were unlikely to have an important effect on the dynamics of sage-grouse populations (Sedinger et al. 2010). In Idaho, researchers found that female sage-grouse were more susceptible to harvest than males and recommended caution when establishing hunting seasons and taking a relatively conservative approach to setting seasons and bag limits (Connelly et al. 2010). These researchers also noted that even if hunting is additive to other sources of mortality, populations can withstand some hunting, especially given that sage-grouse harvest is often low and variable. We believe the WGFD has exhibited appropriate harvest management strategies, including reduced season length and bag limits and hunting closures as necessary, that has sustained sage-grouse populations and opportunities for sportsmen and women.

**Recommendations:** We recommend that a revised EO explicitly acknowledge state wildlife agency management of sage-grouse and sustainable harvest as a de minimis activity, as the USFWS and WGFD already have done (see September 5, 2014 WGFD directive). A new “Whereas” clause on hunting as a de minimis activity should be crafted and included in the beginning of a revised EO (pages 1-3), and listed in Attachment C.

### **General Comments, Questions and Clarifications**

*General Habitat:* The core area strategy by design deemphasizes already existing general habitat used by grouse and its degradation or loss that goes unmitigated, which contributes to the continued overall decline of habitat across the State. Core areas reflect a refugia-style management approach that require connectivity to thwart isolating populations. While we are not suggesting that all general habitat be managed as core, we do believe some general habitat areas are more important than others and especially for connectivity between core areas. We recommend the revised EO place more emphasis on connectivity and the potential need for managing some general habitat areas more conservatively to ensure functional connectivity.

*Broader Landscape-scale Analyses:* The current analysis of density and disturbance occurs at the lek-centric landscape scale and we are not aware of metrics to evaluate the influence of one such landscape on another in a broader spatial context (e.g., how would leasing to say 4% disturbance impact an undisturbed landscape that is adjacent to one currently at the 5% limit and another already disturbed to 16%; versus all 3 hypothetical landscapes in a completely undisturbed state?). Also, it is possible to simply move the boundary of a project that would exceed the 5% cap to a new configuration that would not, but without an

analysis of effects on functionality of adjacent landscapes. We suggest the SGIT work with scientists to evaluate potential metrics to evaluate these broader landscape-landscape relationships and effects and incorporate into the EO implementation.

*Future Research:* Like all state and federal plans range-wide, Wyoming's sage-grouse EO is part of a grand experiment that, while grounded in past science, has yet to be tested. As stated previously, we believe specific research efforts are needed to test the effectiveness of EO stipulations and conservation measures and the results used in an adaptive management context to make necessary adjustments in the future. This cannot be overstated, as we currently do not really know the full effect of EO implementation, if both direct and indirect impacts have been offset, or effectiveness of restoration efforts.

*Winter Concentration Areas:* EO Page 5, #12; and Attachment A page 5 – what has been discovered regarding winter concentration areas to date? This clause indicates the State will develop appropriate local, science-based standards for managing disturbance in identified and mapped winter concentration areas. We support this and hope to see these management guidelines and stipulations included in the revised EO.

*Adaptive Management and EO Adjustments:* EO Page 6, #18 and 21 – What has been done regarding adaptive management (#18) or any analyses to determine if indeed there might be substantial and compelling information warranting adjustments to the Core Area Protection strategy (#21)? What criteria were used to define “substantial” and/or “compelling?” If such criteria do not exist, we recommend their development and integration into EO decision-making. Also, what is the justification for not altering stipulations for 7 years absent “substantial and compelling” evidence? It is not clear why this timeline was used, beyond the fact that the original EO was signed in 2008 and 7 years would add up to the 2015 decision timeline. This timeline should be discussed, re-evaluated and justified.

In Attachment B, page 10, how are natural factors like precipitation and associated habitat quality that naturally drive population increases and decreases factor into decisions as to whether a project operator's adaptive management actions actually do lead to desired population increases?

*Connectivity Areas:* Attachment A, Page 5 – Has development been limited and how has the recent surge in leasing addressed these connectivity areas? This should be included in the recommended synthesis report for EO implementation (see Monitoring, Recording, and Reporting above).

*Science and Stipulations:* While we do not expect there to be an immediate change to the current stipulation of 0.6-mile NSO around active leks, we have long questioned its scientific derivation and effectiveness that clearly has never been tested. We are not aware of any science that specifically supports this buffer distance relative to development impacts and the relationship with lek attendance and persistence. In fact, there is ample evidence suggesting impacts on lek attendance and persistence extends far beyond 0.6 miles. To the best of our knowledge, the 0.6-mile NSO buffer comes from a paragraph in Colorado's sage grouse conservation plan developed in the early 2000s that was apparently derived by assessing lekking data available at that time indicating most males dispersed within 0.6 miles away from the lek after their morning courtship behavior during the breeding season (M. Holloran, personal communication.). This is a classic situation where numbers become dogmatic in management without empirical support. While this stipulation may maintain the integrity of the habitat in the immediate vicinity of a lek, to our knowledge there is no evidence regarding relationships with lek or nest attendance, abandonment and other metrics of potential impact and effectiveness of this stipulation. We recommend continued monitoring and testing of assumptions for this stipulation to establish these relationships for possible needed adjustments in the future.

*Clarifications:* On EO page 4, #4, 3<sup>rd</sup> sentence: We realize and assume the language on adding additional core was leading up to the 2015 decision, but we would appreciate knowing exactly what criteria were used to determine how much habitat indeed would be needed to thwart a listing, as we feel this issue may arise again in the future. If in an adaptive management context, it was determined that additions to core are warranted, how will the State determine the needed amount to thwart future listings? Explicitly clarifying the criteria would be helpful.

On EO page 5, #7, the clause states that “development consistent with the stipulations.... shall be deemed sufficient to avoid negative impacts to greater sage-grouse.” This is contradictory to what the core area strategy actually does which is minimize impacts – loss of core habitat as previously discussed is not likely without residual impacts and consequences in certain places or over time. This clause also contradicts other statements in the EO reflecting minimization as opposed to avoidance of impacts. This terminology should be consistent.

We greatly appreciate you considering our perspectives and recommendations on Wyoming’s Sage-Grouse EO. We look forward to continuing to work with the State and all stakeholders to effectively balance multiple land uses with the conservation of fish and wildlife habitat and our sporting traditions.

Respectfully,



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cc: Beth Calloway, Renny MacKay, Bob Budd, Brian Nesvik, Angela Bruce, Mary Jo Rugwell

## Literature Cited

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WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Comments to potential revisions to the Executive Order

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**Richard Garrett** <richard.garrett@tnc.org>  
To: "wgfd.hpp@wyo.gov" <wgfd.hpp@wyo.gov>

Wed, May 1, 2019 at 3:55 PM

Director Nesvik,

On behalf of The Nature Conservancy in Wyoming, I am pleased to submit our comments regarding potential revisions to The Executive Order on Greater sage-grouse protections in response to Governor Gordon's request.

We look forward to all of the next steps and thank you and Governor Gordon for this opportunity.

Sincerely,

Richard Garrett  
External Affairs Director  
The Nature Conservancy of Wyoming  
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**TNC Cover Letter and Attachment Ideas, EO Revisions.docx**  
12663K



May 1, 2019

Brian Nesvik, Director  
Wyoming Game and Fish Department  
5400 Bishop Boulevard  
Cheyenne, WY 82006  
wgfd.hpp@wyo.gov

***Re: Comments on 2015-4 Sage-Grouse Executive Order***

Dear Director Nesvik,

On behalf of The Nature Conservancy in Wyoming, its board of trustees, my colleagues and our members, I am pleased to submit our comments as requested by Governor Gordon to “inform (his) review (of the existing Executive Order for Greater sage-grouse protections) and help identify areas where we can improve upon what is already working while keeping a steady course.”

This year, our organization is celebrating its 30<sup>th</sup> anniversary in support of conservation-based science in Wyoming. Our beautiful state is widely recognized for balancing economic well-being with protections for habitat and wildlife, all on behalf of this and future generations. Governor Gordon is clearly committed to honoring this legacy and building upon it. His leadership and the dedication of your agency (and others) are critical to sustaining and building Greater sage-grouse populations not just for that species but for the other 351 species, including people, that depend on the sagebrush steppe for their well-being.

Over the course of the last two years, we’ve seen a diminishment in support of the collaboration by federal agencies that was so vital in making sure the Greater sage-grouse was not listed as endangered. After working for so long and with so many people to craft plans that were intended to offer a road map for continued success, it was disheartening to find those key partners’ commitment seemingly reduced. And yet with that, comes new opportunity. There is now, with Governor Gordon’s initiative and support, a chance to make what we have already done even better. It is in that spirit that we offer thoughts about the Attachments to the Executive Order. They follow this cover letter along with sidebar comments which express ideas that we think deserve your careful scrutiny and Governor Gordon’s thoughtful consideration.

As we worked towards offering comments, our process was guided by science and nine principles, the first of which was offered by Governor Gordon in his request for comments –

- 1) “The Executive Order is the State of Wyoming’s primary regulatory mechanism to protect the species and its habitat. It outlines procedures that seek to minimize disturbance and incentivize development outside of designated “core population areas” for the bird”.
- 2) Wyoming’s approach to mitigation will be unquestioned by employing the full mitigation hierarchy – ***Avoid, Minimize, Compensate*** – with a strong emphasis on avoidance as the most effective mitigation tool available and the most cost

effective. We ask that consideration be given for The Executive Order to affirm the state's strong preference for and its commitment to avoidance.

- 3) We should work to make sure that bird populations maintain genetic diversity through connectivity – in other words, offer safeguards between core areas so that birds can move across their range.
- 4) Ensure that the carrying capacity of the core areas is not diminished and in fact, seek ways to enhance habitat so that the carrying capacity is increased.
- 5) Establish and maintain appropriate, meaningful, durable mitigation tools – there will likely be times when impacts are unavoidable. And yet with those impacts comes opportunity – we can work together to restore and reclaim impacted areas (The Nature Conservancy is already doing this kind of work with another state agency to help restore abandoned mine lands). Mitigation should be additive, durable, sustainable and monitored.
- 6) Be sure to have meaningful, accessible tools for data collection and reporting. Our researchers and scientists know how vital information is - we cannot make the best decisions unless the data is available.
- 7) Coordinate across agencies – there are many local, state and federal agencies that have important roles to play to ensure the success of a revised Executive Order. Governor Gordon is uniquely positioned to bridge communication and jurisdictional barriers in ways that others cannot.
- 8) Work to ensure the full functionality of core population areas, emphasizing timely and effective restoration. We need to address as effectively as possible invasive species and disease (for example, West Nile Virus).
- 9) Prioritize development outside of core areas and weigh-in when federal agencies propose lease sales that are in core areas. Governor Gordon's voice on this subject will be very powerful.

In closing, we express our gratitude to you and Governor Gordon for the opportunity to offer what we intend as constructive and realistic ideas for, if he deems it appropriate, a revised Executive Order. We agree with Governor Gordon when he says "Sage-grouse are an important species to Wyoming. The State has a significant interest in seeing that the bird remains protected while allowing for responsible development."

We look forward to the future with a great deal of optimism, knowing that we have this chance to continue our work together for the benefit of Wyoming.

Sincerely,

Richard Garrett  
External Affairs Director  
The Nature Conservancy,

258 Main Street  
Lander, WY 82520  
307-349-7945 cell

Wyoming

Delivered electronically

EXECUTIVE ORDER 2015-4  
ATTACHMENT A

Figure 1.

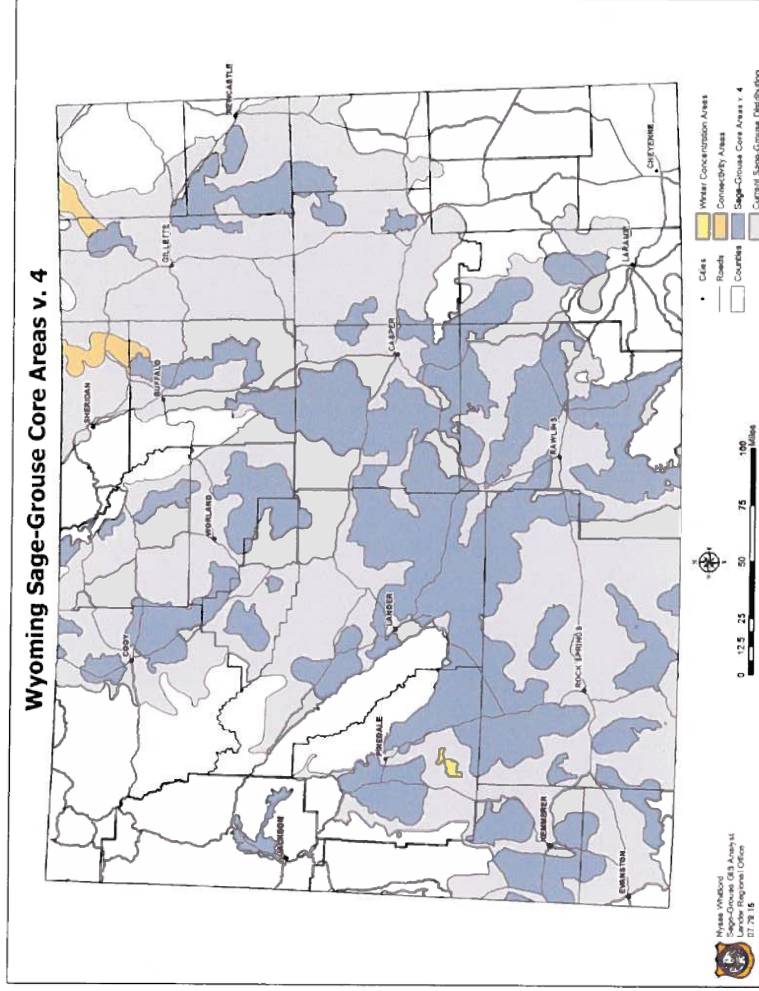
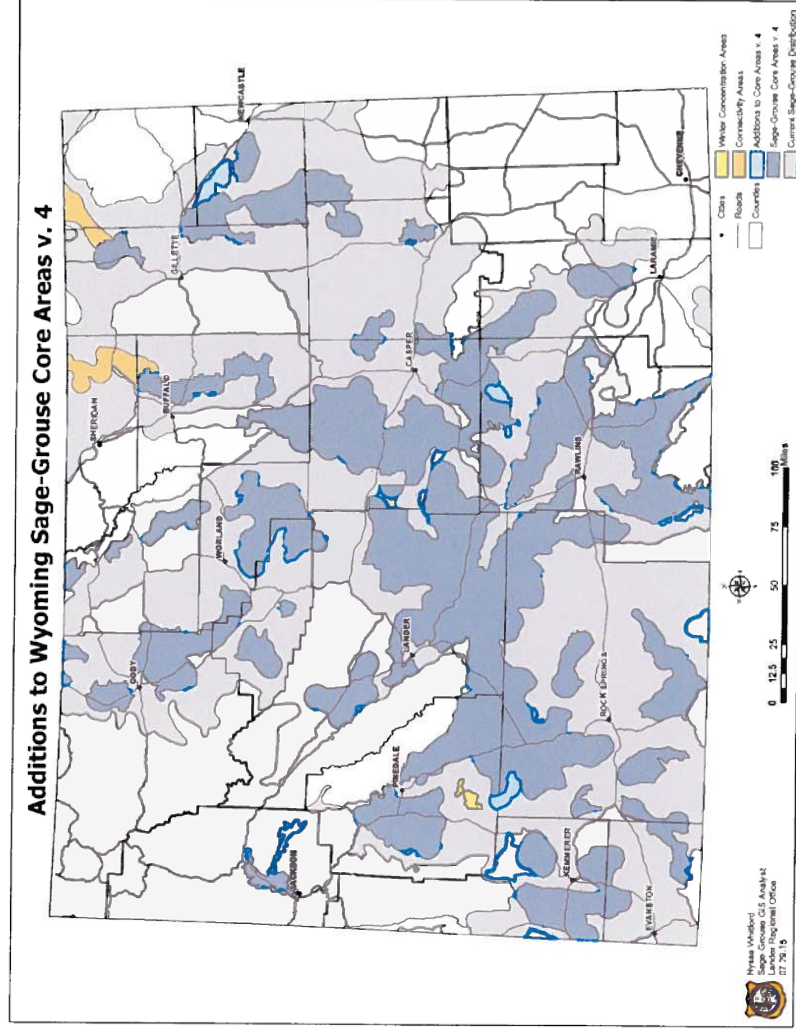


Figure 2.



## **HOW THE WYOMING GREATER SAGE-GROUSE CORE AREA PROTECTION STRATEGY WAS DEVELOPED**

Beginning in 2007, the Sage Grouse Implementation Team was charged with three primary tasks: (1) identification of areas where Greater sage-grouse and their habitats would be most effectively conserved, (2) development of a strategy to reduce or eliminate potential threats to the species, and (3) development of methodology to evaluate, document and track potential impacts over time. The following describes those efforts to date.

### **1. Establishment of Greater Sage-Grouse Core Population Areas**

Greater sage-grouse lek location and attendance data as identified through modeling of bird populations and habitat were overlaid with areas of valid existing rights to produce the Greater sage-grouse Core Population Area map for Wyoming (Figure 3). This iterative process consisted of a series of reviews conducted in the field by Local Working Group (LWG) and others with a thorough understanding of local Greater sage-grouse use to assure that areas included as core habitat were a true representation of actual conditions on the ground. Similar processes were used in 2010 (Figure 4) and 2015 (Figure 5) to refine the Core Population Area mapping, resulting in the current Core Population Areas.

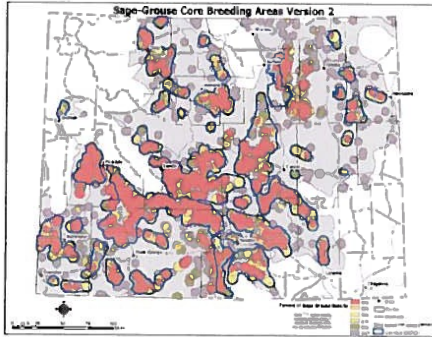


Figure 3. Greater sage-grouse breeding density and Core Population Areas (Version 2) associated with Executive Order 2008-2.

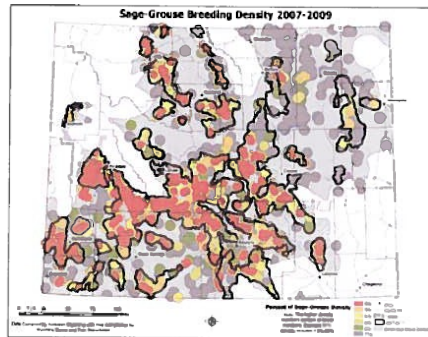


Figure 4. Greater sage-grouse breeding density and Core Population Areas (Version 3) associated with Executive Orders 2010-4 and 2011-5.

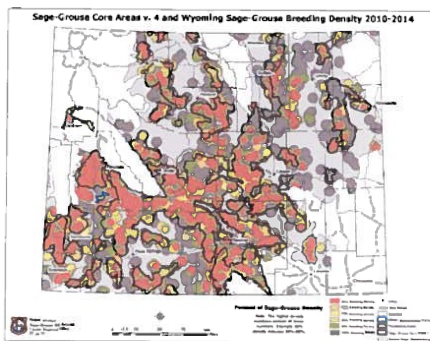


Figure 5. Greater sage-grouse breeding density and Core Population Areas (Version 4) associated with Executive Order 2015-4.

A kernel density function was applied to the lek location and attendance data to develop the final Greater sage-grouse density maps and later adjustments (Doherty et al. 2010, 2011). The red areas on Figures 3 and 4 represent the breeding habitat for 65% of Greater sage-grouse in Wyoming based on lek size and location. The maps illustrate population proportions at a given time, not trends over time. This method was based on breeding birds and did not take into account late brood-rearing and wintering seasonal habitats. During the 2010 revision of Core Population Area boundaries in Wyoming, both late brood-rearing and winter use were considered in the process and most of these seasonal habitats associated with birds in the existing Core Population Area were included in the final product (Figure 4). The eight LWGs assisted in the revision process by using highly-detailed habitat imagery (1 meter NAIP) and reviewing new

lek and development data. These activities were open to the public and other interests throughout the process.

The resultant 2008, 2010 and 2015 (Figures 3, 4, and 5) Core Population Areas encompass approximately 83% of the Greater sage-grouse population, on approximately 24% of the surface area of the State of Wyoming (unpublished data, Wyoming Game and Fish Department, Gamo et al. 2013).

### Connectivity Areas

Connectivity corridors are recognized as areas important for maintaining the transmission of genetic material between populations. These corridors have been identified as the most likely dispersal routes used by Greater sage-grouse to travel between potentially isolated populations in Wyoming to populations in neighboring states. Viable corridors reduce the threat of creating isolated populations in Wyoming and adjacent populations in neighboring states. Connectivity corridors are managed to limit anthropogenic development and have been delineated to increase the likelihood of natural immigration/emigration important for maintaining genetic variability in Core Populations Areas.

### Winter Concentration Areas

The identification of Core Population Areas is intended to capture all seasonal requirements for Greater sage-grouse; however, there is a recognition that in some cases Core Population Areas may not capture all Greater sage-grouse needs (Aldridge and Boyce 2007, Doherty et al. 2008, Doherty et al. 2011). Specifically, winter concentration areas, defined as places where large numbers of Core Population Area Greater sage-grouse congregate and persistently occupy between December 1 and March 14, should be identified and protected. Identification of winter concentration areas should be based on habitat features and repeated observations of winter use by biologically significant numbers of Greater sage-grouse (e.g., groups of  $\geq 50$  Greater sage-grouse) using a validated Resource Selection Function (RSF) modeling approach.

## 2. Management Goals and Mitigation in the Greater Sage-Grouse Core Area Protection Strategy

The Wyoming Greater sage-grouse Core Area Protection strategy represents a proactive identification of a set of conservation actions to maintain and enhance a viable and connected set of populations before the opportunity to do so is lost (Doherty et al 2011). The strategy is based on the identification of important habitat areas for Greater sage-grouse and a set of actions that when taken are intended to ensure the long-term survival of Greater sage-grouse populations in Wyoming. The strategy follows an established hierarchy of *avoidance*, understanding that the primary mission is avoiding impacts to and protecting the best remaining habitat for Greater sage-grouse; *minimizing* impacts where they cannot first be avoided; and when Core Population Area thresholds are exceeded, *compensating* for any unavoidable impacts to Greater sage-grouse.

**Comment [RG1]:** We suggest updating the 'Connectivity Areas' section to reflect new research and activities that further strengthen the intent of the section, using the example of the delineation of corridors between MT and WY

Re: Management Goals & Mitigation – we suggest adding language that recognizes that establishing and maintaining high quality sagebrush habitats throughout the range of the bird is critical to the success of the core population area concept. In this regard, the strategy follows an approach of incentivizing accelerated restoration and reclamation of impacted land promoting enhancement of suboptimal habitats throughout Wyoming.

**Comment [RG2]:** Re: Minimization – we suggest language to clarify and strengthen the section which recognizes that the level of allowable development does not eliminate impacts and if that is the case that compensation may be required as a mitigation tool

We also suggest that techniques and requirements for enhancing habitat also be adopted as a way to resolve historic impacts. Enhancement should be incentivized wherever practical.

## **Avoidance**

Preferred development plans avoid negative impacts in Core Population Areas and other Executive Order delineated habitats used by Core Population Area Greater sage-grouse. This maximizes protections for both Greater sage-grouse and sagebrush habitat. Avoidance can be both spatial and temporal.

## **Minimization**

When development occurs within Core Population Areas and other Executive Order delineated habitats used by Core Population Area Greater sage-grouse, all reasonable options are pursued to minimize impacting additional suitable habitat and/or maintaining impacts below identifiable thresholds to the greatest extent possible. This may result in new disturbance within Core Population Areas, but the disturbance is managed not to exceed Executive Order thresholds and result in no discernible impacts at the population level. Development plans are managed to limit disturbance to less than 5% and no more than an average of one oil and gas pad or mining site per 640 acres within the Density Disturbance Calculation Tool (DDCT) project area.

## **Compensation**

The complexity of developing compensatory mitigation projects that provide biologically meaningful benefits to Greater sage-grouse populations requires rigorous standards for mitigation to be defined and developed. Performance standards (e.g., net benefit to Greater sage-grouse), monitoring requirements, and adaptive management plans should explicitly link landscape conservation actions to Core Population Areas and other Executive Order delineated habitats used by Core Population Area Greater sage-grouse and statewide landscape conservation objectives for Greater sage-grouse. See also Attachment H.

### **3. Use of the DDCT in Managing the Greater Sage-Grouse Core Area Protection Strategy**

A 4-mile radius around active leks captures 74-80% of nesting females associated within their lek of breeding. The 4-mile distance has been confirmed by multiple studies as having particular importance to Greater sage-grouse in the West, including the majority of seasonal habitats associated with an individual lek, and falls within a reasonable range of buffers (Manier et al. 2014) for Greater sage-grouse. This radius accounts for all types of disturbance within the background of measurable impacts to Greater sage-grouse in field studies. By using the 4-mile radius, the DDCT achieves both a realistic consideration of impacts in a relevant assessment area, while avoiding dilution of existing disturbance being considered in conjunction with any one proposed development.



**Comment [RG3]:** Re: Core Population Area Monitoring and Management, we suggest that the data be used to assess effectiveness and that annual reports be provided and publicly accessible

### **Core Population Area Monitoring and Management:**

A system of interagency coordination has been developed to monitor and track development and conservation activities across Core Population Areas to determine whether development actually meets the thresholds of this Executive Order (see Attachment B).

#### ***Literature Cited:***

- Aldridge, C. L. and M. S. Boyce. 2007. Linking occurrence and fitness to persistence: habitat-based approach for endangered greater sage-grouse. *Ecological Applications* 117:508–526.
- Doherty, K. E., D. E. Naugle, B. L. Walker, and J. M. Graham. 2008. Greater sage-grouse winter habitat selection and energy development. *Journal of Wildlife Management* 72:187–195.
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- Doherty, K. E., D. E. Naugle, H. E. Copeland, A. Pocewicz, and J. M. Kiesecker. 2011. Energy development and conservation tradeoffs; systematic planning for Greater sage-grouse in their eastern range. Pp. 505-516 *in* S. T. Knick and J. W. Connelly (editors). Greater sage-grouse: ecology and conservation of a landscape species and its habitats. *Studies in Avian Biology* (vol. 38). University of California Press, Berkeley, CA.
- Gamo, R. S., J. D. Carlisle, J. L. Beck, J. C. Bernard, and M. E. Herget. 2013. Can the greater sage-grouse serve as an umbrella species for other sagebrush-dependent wildlife? *The Wildlife Professional*.
- Manier, D.J., Bowen, Z.H., Brooks, M.L., Casazza, M.L., Coates, P.S., Deibert, P.A., Hanser, S.E., and Johnson, D.H., 2014, Conservation buffer distance estimates for Greater Sage-Grouse—A review: U.S. Geological Survey Open-File Report 2014–1239, 14 p., <http://dx.doi.org/10.3133/ofr20141239>.
- USFWS. 2014. Greater Sage-Grouse Range-Wide Mitigation Framework v. 1.0

**EXECUTIVE ORDER 2015-4  
ATTACHMENT B**

**Permitting Process and Stipulations for Development in  
Greater Sage-Grouse Core Population Areas**

**PERMITTING PROCESS**

**Point of Contact**

The density of disruptive activities (1/640) and surface disturbance (5%) will be analyzed via the Density/Disturbance Calculation Tool (DDCT), and will be conducted by the Federal Land Management Agency or project proponent (as determined by the BLM Field Office Manager) on federal surface/mineral and the project proponent on non-federal (private, state). The DDCT analysis is then evaluated against Executive Order 2015-4 thresholds.

When State agency permit is needed, without a need for a federal permit:

The first point of contact for addressing Greater sage-grouse Core Population Area issues for any state permit application should be the Wyoming Game and Fish Department (WGFD). Project proponents should contact WGFD at least 45-60 days prior to submitting their application. More complex projects will require more time. It is understood that WGFD has a role of consultation, recommendation, and facilitation, and has no authority to either approve or deny the project. The purpose of the initial consultation with the WGFD is to become familiar with the project proposal and ensure the project proponent understands the DDCT and recommended stipulations. Project proponents need to have a thorough description of their project and identify the potential effects on Greater sage-grouse prior to submitting an application to the permitting agency.

When Federal agency permit is needed, with or without a State permit:

When a project requires federal action prior to approval, the proponent should contact the federal agency responsible for reviewing the action. The federal agency and the proponent will determine the best process for completing the DDCT and receiving recommendations from WGFD. Project proponents need to have a thorough description of their project and identify the potential effects on Greater sage-grouse prior to submitting an application to the permitting agency (see Attachment D).

**Maximum Density and Disturbance Process**

Density and Disturbance Calculation: The DDCT, ([ddct.wygisc.org](http://ddct.wygisc.org)), is a spatially based tool that calculates both the average density of disruptive activities and total surface disturbance within the area affected by the project, or DDCT assessment area. The DDCT assessment area is created based on an initial radius around projects proposed in Greater sage-grouse Core Population Areas (Doherty et al. 2011), and subsequent radius around any occupied, Core

Population Area leks within the initial radius (see Figures 1 – 2). A 4-mile radius is used to identify 75% of the Greater sage-grouse use around a lek (Walker et al. 2007, Fedy et al. 2012). Any portion of the analysis area not found in core is removed (see Figure 3). All activities will be evaluated within the context of maximum allowable disturbance (disturbance percentages, location and number of disturbances) of suitable Greater sage-grouse habitat (see Attachment F for definition of suitable Greater sage-grouse habitat and disturbance of suitable Greater sage-grouse habitat) within the DDCT assessment area (see Figure 4). This tool allows for better siting of projects rather than averaging the density/disturbance calculation per section.

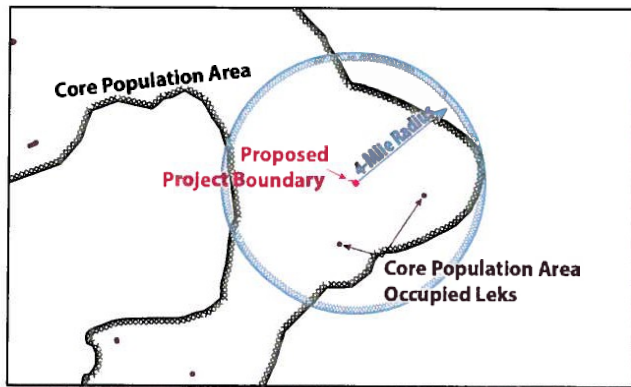


Figure 1 – DDCT assessment area step 1, proposed project boundary.

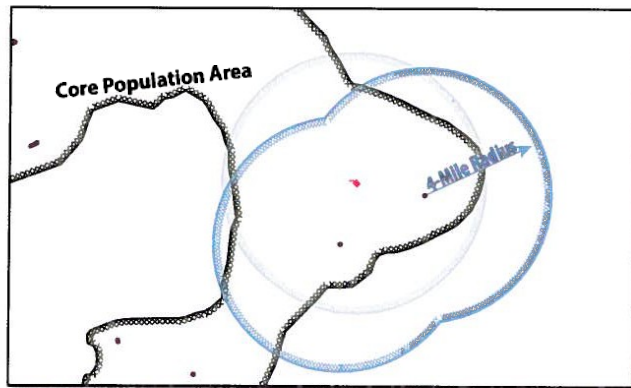
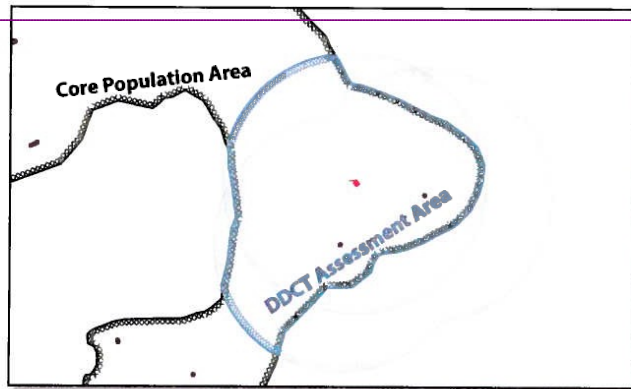


Figure 2 - DDCT assessment area step 2, lek boundaries.



**Comment [RG4]:** Re: the paragraph that begins "All lands within Core Population Area boundaries...." We suggest it be further clarified to analyze impacts using the DDCT for core areas as a whole and also for individual leks

Figure 3 - DDCT assessment area step 3, remove non-core population areas.

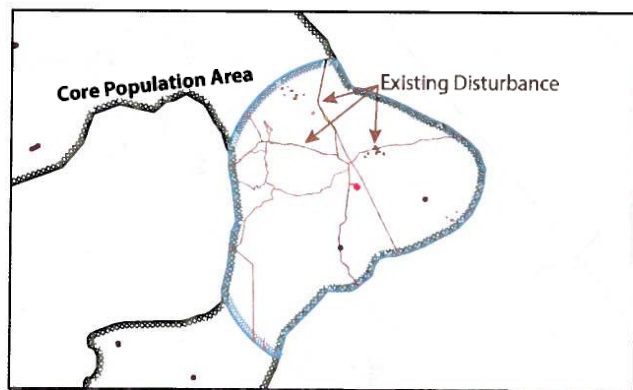


Figure 4 - Existing and proposed disturbance in the DDCT assessment area.

All lands within Core Population Area boundaries are considered suitable habitat unless documented. Mapped unsuitable habitat is treated as neither suitable habitat, nor disturbance, which results in the area being removed from the DDCT assessment area altogether.

Density and disturbance analysis: The total number of discrete disruptive activity features, as well as the total disturbance acres within the DDCT assessment area will be determined through an evaluation of:

- Existing disturbance (Greater sage-grouse habitat that is disturbed due to existing anthropogenic activity and wildfire).
- Approved permits (that have approval for on the ground activity) not yet implemented.

- Validation of the digitized disturbance through on the ground evaluation.

### Avoiding and Minimizing Impacts

See Attachment A.

The following is the suggested administrative process for avoiding and minimizing impacts, as necessary.

For valid existing rights: If the proposed project DDCT is at or above Executive Order thresholds, the project proponent, WGFD and the permitting agency must determine whether or not there are ways to avoid or minimize impacts to Greater sage-grouse before issuing a permit to proceed.

The proponent will work with the permitting agency to site the project within the permit/lease area in a way that will likely have the least amount of impact on local Greater sage-grouse populations (i.e., existing anthropogenic disturbance, geographically remote from Greater sage-grouse habitat, unsuitable habitats). The surface disturbance and disruptive activity resulting from the proposed project will still count towards the 5% disturbance and 1/640 density thresholds (unless the proponent can show that there is a 0.6 mile buffer of unsuitable habitat between the proposed disturbance and suitable habitat). It is understood that project locations are often resource specific and that certain projects may not be able to be relocated to another location.

The proponent and the permitting agency will evaluate the DDCT area and the affected Greater sage-grouse Core Population Area for areas where additional reclamation/restoration actions or management of invasive species (especially within the proponents permit/lease area(s)) could reduce the amount of overall disturbance.

The proponent and the permitting agency should consider other opportunities to improve Greater sage-grouse habitat (i.e., conservation easements, additional reclamation of disturbed habitats in suitable habitats that are no longer necessary).

Should the proponent and the state permitting agency not come to agreement; the Sage Grouse Implementation Team (SGIT) will review the information. The BLM and U.S. Forest Service both have their own appeal process to handle disagreements but may coordinate through the SGIT.

### Permitting

The complete analysis package (DDCT results, map book, and worksheet), and recommendations developed by consultation and review outlined herein will be forwarded to the appropriate permitting agency(s). WGFD recommendations will be included, as will other

**Comment [RG5]:** Reference can be made to allow permitting agencies to "consider other opportunities to improve habitat" – those opportunities might include Conservation Easements, and the restoration of suboptimal habitat.

Perhaps the SGIT should be empowered to weigh in on a solution to habitat enhancement disagreements between state agencies and project proponents that would allow enhancement activities both in the impacted core area and perhaps also areas near the core area

recommendations from project proponents and other appropriate agencies. Project proponent shall have access to all information used in developing recommendations. Where possible and when requested by the project proponent, State agencies shall provide the project proponent with potential development alternatives other than those contained in the project proposal.

If the permit for which a proponent has applied expires, another DDCT analysis is required before issuing a new permit. An additional DDCT is not required for Permit extensions or renewals when no changes are being authorized.

The Executive Order in effect at the time of a complete formal application will remain in effect through the final permit.

Projects that have formally applied for a permit (e.g., CPCN, CUP, NOA, NOI, Initiation of scoping, other permits, or other official public action declaring the project, etc.) should comply with the Executive Order in effect when the project application was made. It is recognized that project planning and permitting can take years to move to a final permit.

#### EXEMPT ACTIVITIES

A list of exempt (“de minimus”) activities, including standard uses of the landscape is available in Attachment C.

#### GENERAL STIPULATIONS

These stipulations are designed and intended to maintain existing suitable Greater sage-grouse habitat by permitting development activities in Core Population Areas in a way that will avoid negative impacts to Greater sage-grouse.

General stipulations are recommended to apply to all activities in Core Population Areas, with the exception of exempt (“de minimus”) actions defined herein (see Attachment C) or specifically identified activities. The specific industry stipulations are considered in addition to the general stipulations.

##### Surface Disturbance

Core Population Area: Surface disturbance will be limited to 5% of suitable Greater sage-grouse habitat per an average of 640 acres over the entire DDCT assessment area. The DDCT process will be used to determine the level of disturbance. Distribution of disturbance may be considered and approved on a case-by-case basis. Unsuitable habitat should be identified in a seasonal and landscape context, on a case-by-case basis, outside the 0.6 mile buffer around occupied leks. This will incentivize proponents to locate projects in unsuitable habitat to avoid creating additional disturbance acres. The primary focus should be on protection of suitable habitats and minimizing habitat fragmentation. See Attachment F for a description of suitable, unsuitable habitat and disturbance.

**Comment [RG6]:** Re: Surface Disturbance we suggest further clarity and tightening of the language to ensure that should the 1/640 density be exceeded that the distribution of disturbance be considered on a case by case basis. Further we suggest a DDCT analysis include an area within 4 miles of the perimeter of all leks

In terms of surface disturbances in non-core population areas we suggest that project proponents present WGFD with a comprehensive description of the project so that the agency can evaluate potential impacts to an adjacent core area. The .25 mile buffer may not be enough to protect core area leks from adjacent non-core area disturbance

Non-Core Population Area: There are no limitations to disturbance outside the 0.25 mile no surface occupancy buffer.

### **Surface Occupancy**

Core Population Area: Within 0.6 miles of the perimeter of occupied Greater sage-grouse leks there will be no surface occupancy (NSO). NSO, as used in these recommendations, means no permanent surface facilities including roads shall be placed within the NSO area. Other activities may be authorized with the application of appropriate seasonal stipulations, provided the resources protected by the NSO are not adversely affected. For example, underground utilities may be permissible if installation is completed outside applicable seasonal stipulation periods and significant resource damage does not occur. Seasonal protections are to be determined on principal usage of site by Greater sage-grouse. The primary purpose of the 0.6 restriction around leks is to avoid disturbing leking birds and to maintain habitat integrity (Holloran 2005, Hess and Beck 2012). This necessitates the limitation of traffic or infrastructure that would encourage human activity around occupied leks.

Non-Core Population Area: Within 0.25 miles of the perimeter of occupied Greater sage-grouse leks there will be NSO (Braun et al. 2002). NSO, as used in these recommendations, means no permanent surface facilities including roads shall be placed within the NSO area. Other activities may be authorized with the application of appropriate seasonal stipulations, provided the resources protected by the NSO are not adversely affected. For example, underground utilities may be permissible if installation is completed outside applicable seasonal stipulation periods and significant resource damage does not occur.

### **Seasonal Use**

Core Population Areas (Holloran 2005): Activities will be allowed from July 1 to March 14 outside of the 0.6 mile perimeter of an occupied lek in Core Population Areas where breeding, nesting and early brood-rearing habitat is present.

Non-Core Population Areas (Braun et al. 2002, Dzialak 2011): Activity will be allowed from July 1 to March 14 outside of the 0.25 mile perimeter of an occupied lek. A 2-mile seasonal buffer from March 15 to June 30, applies to occupied leks where breeding, nesting and early brood-rearing habitat is present. Activities in unsuitable habitat may also be approved year-round on a case-by-case basis. Activities may be allowed during seasonal closure periods as determined on a case-by-case basis.

Special Considerations: Where credible data support different timeframes for these seasonal restrictions, dates may be shifted 14 days prior to or subsequent to the above dates, but not both.

Winter Concentration Areas: In areas identified as winter concentration areas, activities will be allowed March 14 to December 1. Activities in unsuitable habitat may also be approved year-

**Comment [RG7]:** We ask that damage be reclaimed effectively and without delay

In reference to the Halloran cite – we suggest strengthening the language to require a 4 mile seasonal buffer during lekking. We recognize some activities may be permitted on a case by case base during seasonal closures but these incidents should be limited in quantity and duration

We ask that recognition be clarified that P&M activities may impacts core populations and areas and that those activities be minimized and perhaps compensation be required. BLM and USFS should coordinate with the SGIT

round on a case-by-case basis (except in specific areas where credible data shows calendar deviation). Activities may be allowed during seasonal closure periods as determined on a case-by-case basis.

**Production and Maintenance Activities:** Production and maintenance activities are exempt from seasonal use stipulations.

### **Geophysical Exploration**

Geophysical exploration which includes minimal disturbance (3 inch diameter drill holes or just “vibrating”) may be permissible in accordance with seasonal stipulations. Staging areas should be located outside of Core Population Areas, covered through a DDCT process, or placed on existing disturbance.

### **Transportation**

Locate new collector or arterial roads that will have relatively high levels of activity (accessing multiple wells, housing development) greater than 1.9 miles from the perimeter of occupied Greater sage-grouse leks (Lyons and Anderson 2003). Locate new local roads used to provide facility site access and maintenance greater than 0.6 miles from the perimeter of occupied Greater sage-grouse leks. Construct roads to minimum design standards needed for production activities.

**Collector or Arterial Roads** are single-lane or double-lane roads, with travel ways 12 to 24 feet in width. They collect traffic from local roads and connect to arterial roads or public highways. They are operated for intermittent or constant service.

**Local Roads** are single-lane roads with travel ways 12 to 14 feet in width. They connect terminal facilities, such as well sites, to collector, local, arterial, or other higher-class roads. They are operated for low-volume traffic.

### **Overhead Power Lines** (Avian Power Line Interaction Committee (APLIC) 2015)

It will be necessary to construct significant new transmission infrastructure to transport electricity generated in Wyoming to out-of-state load centers. Currently, it is unknown what type of lines impact Greater sage-grouse populations, how, and to what extent (Messmer, et al. 2014). There will be new distribution and transmission lines that will need to be built to service existing approved projects.

For purposes of consistency with this Executive Order there is established a transmission line corridor through Core Population Areas in south central and southwestern Wyoming as illustrated on Attachment I. This 2-mile wide corridor represents the State of Wyoming’s preferred alternative for routing electric transmission lines across the southern portion of the state while reducing impacts to Core Population Areas and other natural resources.

**Comment [RG8]:** As regards Transportation – use of roads by vehicles should be minimized and remote access approaches and techniques employed.

Overhead Power Line research completed since 2015 reveals that transmission lines negatively impact sage-grouse and that research should be incorporated into the attachment (Gibson et al. 2018, Kohl et al. 2019, LeBeau et al. *In Review*) Application of this research suggests that compensation be required for transmission lines.

New transmission lines constructed within corridors identified in this Executive Order (see Attachment I) or within ½-mile either side of existing or permitted (prior to August 1, 2008) 115 kV or larger transmission lines, creating a corridor no wider than 1-mile shall be considered consistent with this Executive Order if construction occurs within the corridor between July 1 and March 14 (or between July 1 and December 1 in Executive Order identified and mapped winter concentration areas). New transmission lines constructed within ½-mile either side of 115kV or larger transmission lines in existence or permitted prior to the date of this Executive Order and within Core Population Areas added as a result of this Executive Order, creating a corridor no wider than 1-mile, shall be considered to be consistent with this Executive Order if construction occurs within the corridor between July 1 and March 14 (or between July 1 and December 1 in Executive Order identified and mapped winter concentration areas).

**Comment [RG9]:** Re: Noise -- We have long advocated that noise level restrictions should be clarified and tightened. We believe that monitoring protocols are available from WGFD that can be incorporated into the attachment.

Re: Vegetation Removal -- If vegetation removal is necessary, we suggest that minimization and compensation be required by WGFD. And, of course, restoration is an important component, too.

New transmission lines outside the above described corridors but within Core Population Areas should be authorized or conducted only when it can be demonstrated that the activity will avoid negative impacts to Greater sage-grouse. If it is absolutely necessary to site new distribution and transmission lines through a Core Population Area outside of an existing corridor, lines should be sited to minimize negative impact on Greater sage-grouse or their habitats, and preferentially consider siting along or adjacent to existing long-term linear disturbance features whenever possible (i.e., along existing occupied above ground utilities or roads).

Proponents are encouraged to apply appropriate Best Management Practices (BMPs) specific to electric utility facilities (see APLIC 2015); otherwise, locate overhead lines at least 0.6 miles from the perimeter of occupied Greater sage-grouse leks.

Lines permitted but not located in an Executive Order transmission corridor will be counted towards the 5% disturbance calculation (line disturbance is equal to ROW width X length and includes all access roads, staging areas, and other permanent surface disturbance associated with construction outside of the ROW).

### **Noise**

New project noise levels, either individual or cumulative, should not exceed 10 decibels (as measured by  $L_{50}$ ) above baseline noise at the perimeter of a lek from 6:00 pm to 8:00 am during the breeding season (March 1 to May 15). Specific noise protocols for measurement and stipulations for implementation will be developed as additional research and information emerges.

### **Vegetation Removal**

Vegetation removal should be limited to the minimum disturbance required by the project. All topsoil stripping and vegetation removal in suitable habitat is limited to between July 1 and March 14 in areas that are within 4-miles of an occupied lek. Production and maintenance activities (surface mining) outside seasonal stipulations are considered permissible once the vegetation is removed outside the seasonal stipulations. Initial disturbance in unsuitable habitat

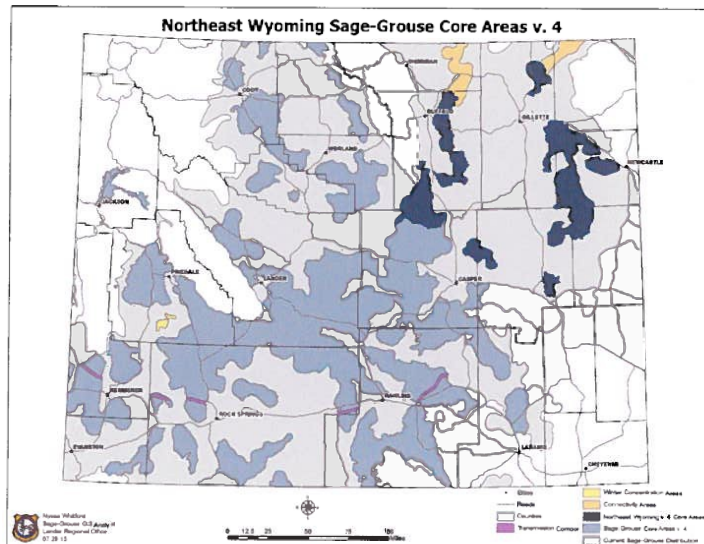
between March 15 and June 30 may be approved on a case-by-case basis. It is important that the “viability” of the topsoil is maintained. A set of BMPs for protecting top soil are outlined in Attachment G.

**Comment [RG10]:** Sagebrush treatments should promote new sagebrush establishment as well as improvements to existing vegetation.

## Sagebrush Treatment

Sagebrush eradication is considered disturbance and will contribute to the 5% disturbance factor. Northeast Wyoming, as depicted in Figure 5, is of particular concern because sagebrush habitats rarely exceed 15% canopy cover and large acreages have already been converted from sagebrush to grassland or cropland. Absent solid demonstration that the proposed treatment will not reduce canopy cover to less than 15% within the treated area, habitat treatments in Northeast Wyoming (Figure 5) should not be conducted. In stands with less than 15% cover, treatment should be designed to maintain or improve sagebrush habitat. Sagebrush treatments that maintain sagebrush canopy cover at or above 15% total canopy cover within the treated acres will not be considered disturbance. The WGFD has developed a Vegetation Treatment Protocol (July 8, 2011 or updated version) for treating sagebrush to be consistent with this Executive Order. Treatments in Core Population Areas shall follow the Protocol or the treatment acreage may be considered disturbance.

Figure 5



## **Reclamation**

Reclamation should re-establish native grasses, forbs and shrubs during interim and final reclamation to achieve cover, species composition, and life form diversity commensurate with the surrounding plant community or desired ecological condition to benefit Greater sage-grouse and replace or enhance Greater sage-grouse habitat to the degree that environmental conditions allow. Seed mixes should include two native forbs and two native grasses with at least one bunchgrass species. See Attachment E. Where sagebrush establishment is prescribed, establishment is defined as meeting the standard prescribed in the individual reclamation plan. Landowners should be consulted on desired plant mix on private lands. The operator is required to control noxious and invasive weed species, including cheatgrass. Rollover credit, if needed, will be outlined in the individual project reclamation plan.

Credit may be given for completion of habitat enhancements on bond release or other minimally functional habitat when detailed in a plan. These habitat enhancements may be used as credit for reclamation that is slow to establish in order to maintain the disturbance cap or to improve nearby Greater sage-grouse habitat.

Conditions for determining when disturbed lands are now considered suitable can be found in Attachment F.

## **Monitoring/Adaptive Response**

Proponents of new projects are expected to coordinate with the permitting agency and local WGFD biologist to determine which leks need to be monitored and what data should be reported by the proponent. Certain permits may be exempted from monitoring activities pending permitting agency coordination. If declines in affected leks (using a three-year running average during any five year period relative to trends on reference leks) are determined to be caused by the project, the operator will propose adaptive management responses to increase the number of birds. If the operator cannot demonstrate a restoration of bird numbers to baseline levels (established by pre disturbance surveys, reference surveys and taking into account regional and statewide trends) within three years, operations will cease until such numbers are achieved.

## **PREEXISTING OIL AND GAS UNITS**

In administering oil and gas plans of development in Core Population Areas, logical and systematic planning will occur in accordance with the terms of oil and gas unit agreements established prior to August 1, 2008 and the goals of this Executive Order. In administering oil and gas plans of development in Core Population Areas added as a result of this Executive Order, logical and systematic planning will occur in accordance with the terms of oil and gas unit agreements in existence prior to the date of this Executive Order and the goals of this Executive Order. This will be accomplished by concentrating activity within existing unit boundaries even if disturbance and density exceed Executive Order thresholds within the DDCT assessment area.

**Comment [RG11]:** Re: Reclamation – an operator should coordinate with state-level efforts in ways that benefit both the individual reclamation site and other state efforts

Re: Monitoring/Adaptive Response – a project proponent should not only propose but also implement an approved adaptive management response. Compensatory mitigation may be required.

Re Pre-existing oil and gas units – as referenced in our cover letter, we ask that the Governor's EO actively encourage federal agencies to maintain accurate and timely records and provide that the records be publicly accessible

Each situation should be addressed with flexibility and an understanding of the local landscape, habitats, and other factors.

Federal oil and gas units in effect prior to August 1, 2008 are not subject to new Greater sage-grouse mitigation measures contained in Attachment B of this Executive Order with the exception that unit operators cannot initiate activities resulting in new surface occupancy within 0.6 miles of the perimeter of an occupied Greater sage-grouse lek. Federal oil and gas units in effect prior to the date of this Executive Order within Core Population Areas added as a result of this Executive Order are not subject to new Greater sage-grouse mitigation measures contained in Attachment B of this Executive Order with the exception that unit operators cannot initiate activities resulting in new surface occupancy within 0.6 miles of the perimeter of an occupied Greater sage-grouse lek.

For oil and gas development approved under the annual plan of development and associated surface disturbance proposals by the unit operator, the unit operator is required to complete the DDCT process including the appropriate worksheet when submitting those applications. It is understood that the level of existing and future development in pre-August 1, 2008 Federal oil and gas units may exceed Executive Order thresholds. It is understood that the level of existing and future development in Core Population Areas added as a result of this Executive Order for Federal oil and gas units may exceed Executive Order thresholds.

The DDCT results and worksheet completed for the pre-August 1, 2008 oil and gas unit activity will be used solely to track disturbance data inside the unit boundary to obtain baseline data for use in Executive Order monitoring and to calculate existing and future planned disturbance. For activity in federal oil and gas units in effect prior to the date of this Executive Order within Core Population Areas added as a result of this Executive Order, the DDCT results and worksheet completed will be used solely to track disturbance data inside the unit boundary to obtain baseline data for use in Executive Order monitoring and to calculate existing and future planned disturbance. Proponents and agencies are still expected to minimize surface disturbance whenever possible and follow all other existing, applicable lease stipulations. As projects are completed, as-built footprints will be collected and the disturbance layer updated with the as-built information.

For project proposals located outside unit boundaries, wherein a DDCT assessment area for the project proposal encompasses parts of pre-August 1, 2008 oil and gas units, disturbance will be based upon the existing disturbance, annual plans of development, or other relevant information regarding development provided by the unit operator, the BLM Reservoir Management Group or other credible sources of information such as the Wyoming Oil and Gas Conservation Commission. For project proposals located outside unit boundaries established prior to the date of this Executive Order, wherein a DDCT assessment area for the project proposal encompasses parts of oil and gas units in Core Population Areas added as a result of this Executive Order, disturbance will be based upon the existing disturbance, annual plans of development, or other relevant information regarding development provided by the unit operator, the BLM Reservoir Management Group or other credible sources of information such as the Wyoming Oil and Gas

**Comment [RG12]:** Re: Specific Stipulations -- Avoidance should be the first and primary tool of choice and can be made more likely by prioritizing development outside of core areas. Are incentives possible/reasonable?

Conservation Commission. In the absence of an annual plan of development or other relevant information, the unit affected will be considered fully developed for the purpose of calculating existing disturbance per the DDCT process.

For new development inside the boundary of a Federal oil and gas unit in effect prior to August 1, 2008 that is not directly related to oil and gas development (e.g., vegetation treatment or gravel pits), the project proponent will be required to comply with all aspects of this Executive Order. For new development inside the boundary of a Federal oil and gas unit in effect prior to the date of this Executive Order within Core Population Areas added as a result of this Executive Order that is not directly related to oil and gas development (e.g., vegetation treatment or gravel pits), the project proponent will be required to comply with all aspects of this Executive Order.

### **SPECIFIC STIPULATIONS** **(to be applied in addition to general stipulations)**

#### **Oil and Gas**

Oil and gas well pads and associated infrastructure densities are not to exceed an average of one pad per square mile (1/640) and suitable habitat disturbed not to exceed 5% of suitable habitat within the DDCT assessment area. As an example, the number of well pads within a two mile radius of the perimeter of an occupied Greater sage-grouse lek should not exceed 11, distributed preferably in a clumped pattern in one general direction from the occupied lek.

#### **Mining**

For development drilling or ore body delineation drilled on tight centers, (approximately 100' X 100') the disturbance area will be delineated by the external limits of the development area. Assuming a widely-spaced disturbance pattern, the actual footprint will be considered the disturbance area.

Monitoring results will be reported annually in the mine permit annual report and to WGFD. Pre-disturbance surveys will be conducted as required by the appropriate regulatory agency.

The number of active mining development areas (e.g., operating equipment and significant human activity) is not to exceed an average of one site per square mile (1/640) within the DDCT.

Surface disturbance and surface occupancy stipulations will be waived within the Core Population Area when implementing underground mining practices that are necessary to protect the human health, welfare, and safety of miners, mine employees, contractors and the general public. The mining practices include but are not limited to bore holes or shafts necessary to: 1) provide adequate oxygen to an underground mine; 2) supply inert gases or other substances to prevent, treat, or suppress combustion or mine fires; 3) inject mine roof stabilizing substances; and 4) remove methane from mining areas. Any surface disturbance or surface occupancy

necessary to access the sites to implement these mining practices will also be exempt from any stipulation.

**Comment [RG13]:** Re: Connectivity Corridors – disturbances within corridors should be avoided and minimized and established in ways to limit barriers to grouse movements – this should apply to both core and non-core corridors

Coal mining operations will be allowed to continue under the regulatory and permit-specific terms and conditions authorized under the Wyoming Environmental Quality Act (WEQA) and the Surface Mining Control and Reclamation Act of 1977 (SMCRA) as administered by the Wyoming Department of Environmental Quality (WDEQ).

- i. There is the expectation that coal activities as permitted under the WEQA and SMCRA will be implemented to protect Greater sage-grouse and their habitat in Core Population Areas to a high level.
- ii. In Core Population Areas, to avoid significant “negative” impacts to Greater sage-grouse, unsuitability criteria for state high sensitive species (i.e., Greater sage-grouse), will be applied to each coal lease application during the federal coal leasing process. This process includes consultation with the State to identify any lands within the application area that are essential for maintaining high priority wildlife (i.e., Greater sage-grouse). Where appropriate, BLM will find such lands to be unsuitable for further federal coal leasing consideration. Incorporation of new leases into existing mining operations is considered allowable by the State without further regulatory obligations under the Greater sage-grouse Core Area Protection strategy, beyond the current requirements under the WEQA and SMCRA.
- iii. In Core Population Areas, it is understood that there will be exceptions for minimal impacts due to existing mines as they expand their existing operations through modified mine plans and new leases.
- iv. The USFWS has agreed that SMCRA is an adequate regulatory mechanism to protect Greater sage-grouse (USFWS letter dated November 10, 2010). Permitting under the WEQA is required to be equally or more stringent than SMCRA (Section 503 SMCRA 1977).

### Connectivity Corridors

See Attachment A.

The suspension of federal and state leases in connectivity corridors (see Attachment A) is encouraged where there is mutual agreement by the leasing agency and the operator. These suspensions should be allowed until additional information clarifies their need. Where suspensions cannot be accommodated, disturbance should be limited to no more than an average of 5% per 640 acres (DDCT Process) of suitable Greater sage-grouse habitat within connectivity corridors.

For protection of connectivity corridors (see Attachment A), a NSO buffer of 0.6 miles around occupied leks or their documented perimeters is required. In addition, a March 15 to June 30 timing limitation stipulation is required within nesting habitat within 4 miles of occupied leks.

**Comment [RG14]:** Re: Process Deviation or Undefined Activities – an acknowledged strength of the WY sage grouse protection process has been broad and diversified collaboration. Within that spirit, WGFD should specifically reach out to and engage with conservation groups (local, regional and state), NGOs, local and regional governments, etc)

### **Underground Rights of Way**

The State of Wyoming and federal management agencies have worked to develop utility corridors in current Resource Management Plans (RMPs). One of the primary purposes of these utility corridors is to encourage placement of future linear development (i.e., pipelines, water lines, fiber optics, etc.) adjacent to existing infrastructure to reduce habitat fragmentation. It is the intent of this Executive Order to continue to incentivize co-location of new pipelines in RMP designated utility corridors. New pipelines proposed in RMP established utility corridors will be required to complete DDCT calculations prior to construction. To allow for accurate future DDCT calculations for projects adjacent to but outside the utility corridors, applicants will submit to the SGIT as-built construction diagrams within 60 days of construction completion that delineate all areas of temporary and permanent disturbance in Core Population Areas including the construction and permanent rights-of-way, roads, storage yards, laydown areas and extra temporary work spaces. The pipeline proponents are not expected to meet Executive Order thresholds within the utility corridor, but the project construction would be subject to appropriate seasonal timing stipulations. The locations of permanent above-ground facilities (such as block valves, compressors, etc.) will be subject to Executive Order thresholds if located outside the designated corridor. Pipelines outside RMP designated utility corridors, but in Core Population Areas, are required to comply with the 5% disturbance per the DDCT analysis.

### **Wind Energy Development**

Wind development is not recommended in Greater sage-grouse Core Population Areas, but will be reevaluated on a continuous basis as new science, information and data emerges.

### **PROCESS DEVIATION OR UNDEFINED ACTIVITIES**

Development proposals incorporating less restrictive stipulations or development that are not covered by these stipulations may be considered depending on site-specific circumstances. The proponent must have data demonstrating that the alternative development proposal will avoid negative impacts to Greater sage-grouse in Core Population Areas. Proposals to deviate from standard stipulations will be considered by a team including WGFD and the appropriate land management and permitting agencies, with input from the USFWS. To deviate from standard stipulations project proponents need to demonstrate that the project development would meet at least one of the following conditions:

- No suitable habitat is present in one contiguous block of land that includes at least a 0.6 mile buffer between the project area and suitable habitat;

- No Greater sage-grouse use occurs in one contiguous block of land that includes at least a 0.6 mile buffer between the project area and adjacent occupied habitat, as documented by total absence of Greater sage-grouse droppings and an absence of Greater sage-grouse activity for the previous ten years; or
- Implementation of a development/mitigation plan that has demonstrated through previous research avoids negative impacts to Greater sage-grouse. The demonstration must be based on monitoring data collected and analyzed with accepted scientific based techniques.

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**EXECUTIVE ORDER 2015-4**  
**ATTACHMENT C**

**Exempt (“de minimis”) Activities**

The following are considered “de minimis” activities:

1. Drilling and outfitting of agricultural or residential water wells (including tank installation, pumps, and agricultural water pipelines) more than 0.6 miles from the perimeter of an occupied lek. Construction within 0.6 miles is allowed from July 1 through March 14, after a habitat evaluation has occurred, and provided development does not occur on the lek. New tanks shall have escape ramps.
2. Electric utilities are obligated by regulation to serve customers with safe and reliable electric service. Likewise, utilities must comply with agency Greater sage-grouse protective stipulations. In order to allow electric utilities the operational ability to provide and maintain service to their customers while affording adequate protection for Greater sage-grouse, distribution lines within 0.6 miles from an occupied lek are considered “de minimis” provided that: (1) construction of lines occurs from July 1 through March 14; (2) such lines are not constructed on the lek itself; and (3) a habitat evaluation has occurred. For general and operational maintenance activities of existing distribution lines, the electric utility shall use appropriate/applicable Best Management Practices for electric utilities (Avian Power Line Interaction Committee 2015). Coordination of ongoing activities with Wyoming Game and Fish Department (WGFD) is encouraged.
3. Preventative or required county road maintenance activities within the right-of-way (blading/smoothing, filling pot holes, graveling, culvert replacement, right-of-way maintenance, cattle guard maintenance, etc.) are considered “de minimis”. Road construction activities (vertical or horizontal realignment, roadway widening, new construction, bridge replacement, etc.) are not considered “de minimis” and may require completion of a Density/Disturbance Calculation Tool (DDCT) analysis (Pendleton 2015).
4. Authorized or required cultural, paleontological, and biological resource and land surveys.
5. Emergency response and public health and safety issues.
6. Existing animal husbandry practices (including branding, docking, herding, trailing, etc.).
7. Existing farming practices and reclamation seeding (excluding conversion of sagebrush habitats to agricultural lands).
8. Construction of agricultural reservoirs, less than 10 surface acres and more than 0.6 miles from the perimeter of an occupied lek. Construction within 0.6 miles is allowed from July 1 through March 14, after a habitat evaluation has occurred, and provided that development does not occur on the lek.

**Comment [RG15]:** Electric utility lines should be constructed in a manner to discourage nesting and perching by raptors, crows and ravens.

Seasonal farm and ranch practices should avoid leks during breeding season and also while reclamation is underway

Reservoirs should be constructed to the extent practical to minimize mosquito breeding habitat and in that way reduce incidence of West Nile Virus – coordination is also essential with WGFD to inform West Nile Virus management/response

9. Construction of aquatic habitat improvements, less than ten wetland or water surface acres, more than 0.6 miles from the perimeter of an occupied lek. Construction within 0.6 miles is allowed from July 1 through March 14, after a habitat evaluation has occurred, and provided development does not occur on the lek.
10. Irrigation (excluding the conversion of sagebrush habitats to new irrigated lands).
11. Spring development; if the spring is protected with fencing and enough water remains at the site to provide mesic (wet) vegetation. Fences should be constructed to be highly visible to Greater sage-grouse (i.e., buck-and-rail, steeljack, etc.) and/or marked to minimize collision potential.
12. New fencing more than 0.6 miles from the perimeter of an occupied lek. New fences or new stretches of fences, with high potential for collisions should be marked or be designed to minimize risk. Construction within 0.6 miles is permitted so long as construction does not occur from March 15 to June 30 or on the lek itself; coordination with WGFD is strongly suggested.
13. Maintenance of existing fence.
14. Herbicide applications within existing road, pipeline, and power line rights-of-ways, application within reclamation areas for weed control, application adjacent to structures or other applications for spot treatments. Pesticide treatment for Grasshopper/Mormon cricket control following Reduced Agent-Area Treatments protocol. Other required or authorized pesticide treatments for state or county listed species or vector treatments for other diseases such as West Nile Virus. All treatments must be done in accordance with regulations and labels. Coordination with Weed & Pest Districts is strongly encouraged.
15. Grazing operations that utilize recognized management approaches (allotment management plans, Natural Resource Conservation Service grazing plans, prescribed grazing plans, etc.).

**Comment [RG16]:** Construction of aquatic habitat improvements will ideally take into account ways to avoid adding mosquito breeding opportunities and the potential incidence of West Nile Virus

It is Wyoming's primary premise that grazing activities are compatible with Greater sage-grouse conservation and may improve habitat for Greater sage-grouse. Grazing management practices maintain or enhance Wyoming rangelands. Properly managed rangelands are capable of sustaining robust Greater sage-grouse populations and a diversity of plant species important to Greater sage-grouse habitat. (USFWS, February 5, 2015, Memo to State Directors and Field Supervisors: Service Position on Livestock Grazing and Working with the Rangeland Owners to Conserve Sage-Grouse)

The State of Wyoming will collaborate with appropriate Federal agencies to: (1) develop appropriate conservation objectives; (2) define a framework for evaluating situations where Greater sage-grouse objectives are not being achieved on Federal land, to determine if a causal relationship exists between improper grazing (by wildlife, wild horses or livestock) and Greater sage-grouse conservation objectives; and (3) identify appropriate site-based action to achieve Greater sage-grouse conservation objectives within the framework.

If grazing adjustments are believed necessary to achieve Greater sage-grouse conservation objectives, coordination among land management agencies and permit/lease holders shall take place. Monitoring data used within the framework will, at a minimum: reflect 5 years of information, include rangeland health assessments, and require conclusion or action to be based on 3 out of 5 consecutive years of data (*i.e.*, Y1-2-3, Y2-3-4, Y3-4-5). These requirements may be waived in case of a catastrophic event such as fire. Further, the State recognizes there is a distinction between conservation objectives and land health standards and that it is possible to achieve land health standards while not achieving Greater sage-grouse conservation objectives and vice-versa. Federal agency participation in the implementation of this Executive Order in no way precludes them from managing federal surface for rangeland health.

**EXECUTIVE ORDER 2015-4  
ATTACHMENT D**

**Federal and State Permitting Agency Coordination**

**Background:**

The Density/Disturbance Calculation Tool (DDCT) process and review of project compliance with Executive Order 2015-4 will be coordinated through the DDCT web application ([ddct.wygisc.org](http://ddct.wygisc.org)).

The proponent should provide the most complete and comprehensive description of a project as possible. Splitting a project into smaller components can cause delay in review and could risk denial of a permit necessary for the entire project. It is recommended that proponents thoughtfully consider and include for review potential future development(s) and/or infrastructure associated with or that may be needed to support the current proposed project.

If the proponent has a concern that a project will not comply with this Executive Order, the proponent should contact the Wyoming Game and Fish Department (WGFD) and the appropriate land management and/or permitting agencies as soon as possible. Noncompliance with this Executive Order is not an automatic permit denial and all projects will be reviewed and potential impacts to local Greater sage-grouse populations and habitat will be assessed. Advanced planning with the permitting agencies and WGFD is the recommended way to resolve issues.

If the proponent submits a DDCT that is not in compliance, the agencies involved will need to discuss all options and potential impacts to local Greater sage-grouse populations and habitat. Initiating these discussions in advance of the final DDCT submittal may yield timelier review/decision results.

1. If federal surface/mineral is involved, the proponent works with the appropriate federal land management agency on the DDCT process and disturbance delineations, then:
  - The federal agency submits the DDCT (and worksheet) for technical review to the DDCT Data Steward at the Wyoming Geographic Information Science Center. The Data Steward will work with the federal agency in completing the technical review process (Note: the federal agency may use a contractor to make the corrections). When completed, the federal agency also submits the DDCT worksheet to the Data Steward.
  - Once technical review is completed, the Data Steward submits the DDCT final results and DDCT worksheet to WGFD Habitat Protection Program (HPP) for policy review.
  - WGFD HPP coordinates with state agencies and the federal agency if there are issues with Executive Order exceedances or compliance.
  - WGFD HPP sends a letter regarding Executive Order compliance and recommendations to the federal agency and copies the proponent and permitting agencies that may also be involved in the project.

- If agencies have questions about the recommendations, they should contact WGFD HPP.

2. If federal surface or mineral is not involved, the project proponent (NOTE: could be a consultant) completes the DDCT process, then:

- Submits the DDCT to the Data Steward for technical review. The Data Steward will work with the proponent to complete the technical review process. When completed, the proponent submits the DDCT worksheet to the Data Steward.
- The Data Steward submits the DDCT final results and DDCT worksheet to WGFD HPP for policy review.
- WGFD HPP coordinates with state agencies if there are issues with Executive Order exceedances or compliance.
- WGFD HPP sends a letter regarding Executive Order compliance and recommendations to the proponent and copies permitting agencies.
- If agencies have questions about the recommendations, they should contact WGFD HPP.

**Comment [RG17]:** Re: Letters from WGFD – the success of the EO will in large part be based on active engagement and coordination with and between state agencies. A requirement for that process may well benefit this section

#### **Letters from WGFD:**

Letters from WGFD will determine whether or not the project complies with the process and stipulations outlined in this Executive Order and may provide recommendations on whether the permit should be issued and/or recommendations on how impacts to the Greater sage-grouse may be minimized. State agencies will be the point of contact for conducting a DDCT analysis for locatable minerals. These recommendations may or may not be accepted by the permitting agency and incorporated in the conditions of the permit. If there are changes to the project, the proponent should complete the DDCT review process again.

The permitting agency should document whether or not the recommendations were accepted and incorporated as part of permit. If the permitting agency is unable to implement a recommendation, the agency should document the circumstances which preclude incorporation into the permit. For example, it is not within the agency's regulatory authority or it is not physically or legally possible to make the recommended changes.

**EXECUTIVE ORDER 2015-4  
ATTACHMENT E**

**Vegetation Monitoring for Suitability Criteria of Reclaimed Areas**

**Goal:** Measurements that should be taken when there is uncertainty concerning the status of reclaimed areas contributing to suitable habitat.

If sagebrush canopy cover is 5%, or greater, as measured by the method described in the Bureau of Land Management's Sage-Grouse Habitat Assessment Framework, it is considered suitable habitat.

When sagebrush canopy cover is less than 5%, but within 60 meters of greater than 5% sagebrush canopy cover, measure to determine compliance with the following conditions:

**Measure for 2 (or more) desirable native grasses at least one of which is a bunchgrass in appropriate sites.** The species present in the reclaimed area should be reflected in an appropriate reference site, described in the ecological site description (ESD) for the reclaimed site(s), or be representative of pre-disturbance species data. A reference site will be agreed upon and determined by the land management agency or owner, Wyoming Game and Fish Department and the proponent. It is recognized that reference sites could be numerous for linear features.

- The **frequency** of occurrence of grass is expected to meet or exceed 70% of the frequency of grass as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data. Grass **canopy cover** measurement is expected to meet or exceed 70% of the grass canopy cover as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.

**Likewise, measure for 2 desirable native forbs.**

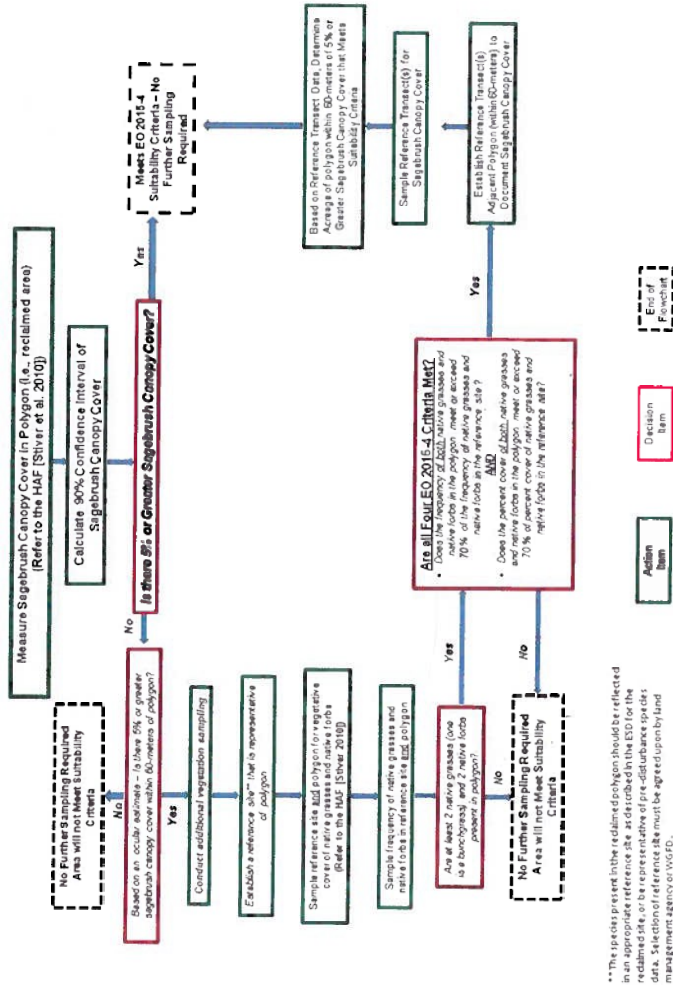
- The **frequency** of occurrence of forbs is expected to meet or exceed 70% of the frequency of forbs as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.
- Forbs **canopy cover** is expected to meet or exceed 70% of the forb canopy cover as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.

**Methodology**

- Sampling timing for grasses, forbs, and shrubs is typically not later than July 1.
- Canopy cover for grasses/forbs: Line Point Intercept (see Habitat Assessment Framework).
- Frequency for grasses/forbs: Plot (rectangles, squares or circles) frequency computed as number of quadrats with the species of interest rooted within it, divided by the total

number of quadrats that are sampled. This value will be multiplied by 100 to yield frequency as a percentage. It is recommended that a minimum of 5 to 10 transects, 30 to 50 meters wide be conducted with a minimum of 10 to 20 quadrats (e.g. Daubenmire frame or quadrat appropriate to the site) placed equidistantly along each transect.

- Canopy cover for sagebrush: Line Intercept (see Habitat Assessment Framework).
- Sample size: The Habitat Assessment Framework provides sample size recommendations. Final estimates must include a 90% confidence interval computed around the mean values estimated from vegetation sampling.



Decision-based Flowchart for Vegetation Sampling Methods and Suitability Determination (Source: TRC 2015)

**EXECUTIVE ORDER 2015-4  
ATTACHMENT F**

**Greater Sage-Grouse Habitat Definitions**

Greater sage-grouse require somewhat different seasonal habitats distributed over large areas to complete their life cycle. All of these habitats consist of, are associated with, or are immediately adjacent to, sagebrush. An abbreviated description of a complex system cannot incorporate all aspects of, or exceptions to, what habitats a local Greater sage-grouse population may or may not utilize. Refer to the Bureau of Land Management's Sage-Grouse Habitat Assessment Framework for further information.

**“Suitable”** Greater sage-grouse habitat (nesting, breeding, brood-rearing, or winter) is within the mapped occupied range of Greater sage-grouse, and:

1. has 5% or greater sagebrush canopy cover (for nesting, brood-rearing and/or winter) as measured by the point intercept method. "Sagebrush" includes all species and sub-species of the genus *Artemisia* except the mat-forming sub-shrub species: *frigida* (fringed) and *pedatifida* (birdfoot);
2. is riparian, wet meadow (native or introduced) or areas of alfalfa or other suitable forbs (brood rearing habitat) within 275 meters of sagebrush habitat with 5% or greater sagebrush canopy cover (for roosting/loafing); or
3. is reclaimed habitat containing at least 2 native grasses (at least one bunchgrass in appropriate sites) and 2 native forbs (see Reclamation, Attachment B) and no point within the grass/forb habitat is more than 60 meters from adjacent 5% or greater sagebrush cover.

**“Transitional”** Greater sage-grouse habitat is land that has been treated or burned prior to 2011 resulting in less than 5% sagebrush cover but is actively managed to meet a minimum of 5% sagebrush canopy cover with associated grasses and forbs by 2021 (as determined by analysis of local condition and trend) and may or may not be considered “disturbed”. Land that does not meet the above vegetation criteria by 2021 should be considered disturbed.

Habitat treatments must meet the current Wyoming Game and Fish Department Protocols for Treating Sagebrush to be consistent with Executive Order 2015-4, Greater Sage-grouse Core Area Protection, or the habitat treated will be considered disturbed. Following wildfire, lands shall be considered “disturbed” pending an implemented management plan with trend data showing the area returning to functional Greater sage-grouse habitat.

- Areas burned by wildfire (after 2011) shall be treated as disturbed pending an implementation management plan with trend data showing the area returning to functional Greater sage-grouse habitat. This is specific only to wildfire. This direction is not intended for other incentive/mitigation/habitat treatment situations.

- The goal is to incentivize restoration of wildfire burns to return as much of the affected burned area back to suitable habitat as quickly as possible. This is a landscape effort and is not considered mitigation banking. This process should be used when wildfire is impacting the disturbance percentages.
- A Technical Team comprised of the U.S. Forest Service, Bureau of Land Management, Natural Resource Conservation Service, the Wyoming Game and Fish Department, Office of State Lands and Investments Forestry Division, Wyoming Department of Agriculture (Weed and Pest), local working groups, conservation districts and private landowners would develop the plan and trending data. It would be the responsibility of the project proponent to conduct the monitoring. An upward trend would be determined through the collection of five years of data and review by the Technical Team.

**Comment [RG18]:** We understand others may suggest adding a category of "Altered" habitat (in the list which also includes "Unsuitable" and "Disturbed"). Altered describes Greater sage-grouse habitat as suitable if remediated. We believe that the WWNRT has undertaken these kinds of projects with measurable success.

**"Unsuitable"** Greater sage-grouse habitat<sup>1</sup> is land within the historic range of Greater sage-grouse that did not, does not, and will not provide Greater sage-grouse habitat due to natural ecological conditions such as badlands, canyons or forests.

**"Disturbed"** suitable Greater sage-grouse habitat<sup>1</sup> is land that has been converted from formerly suitable habitat to grasslands, croplands, mined or otherwise physically disturbed areas. To evaluate the 5% disturbance cap per average 640 acres using the Density/Disturbance Calculation Tool (DDCT), suitable habitat is considered disturbed when it is removed and unavailable for immediate Greater sage-grouse use. These areas may provide habitat at some time in the future through succession or restoration. Disturbed suitable habitats could also include those permanent disturbances such as major reservoirs and cities that once were considered suitable.

The following items are guidelines for determining disturbed habitat for the DDCT process:

- a. Long-term removal occurs when habitat is physically removed through activities that replace suitable habitat with long-term occupancy of unsuitable habitat such as a road, well pad or active mine.
- b. Short-term removal occurs when vegetation is removed in small areas, but restored to suitable habitat within a few years of disturbance, such as a successfully reclaimed pipeline, or successfully reclaimed drill hole or pit.
- c. There may be additional suitable habitat considered disturbed between two or more long-term (greater than 1 year) anthropogenic disturbance activities if the activities are located such that Greater sage-grouse use of the suitable habitat between these activities is significantly reduced due to the close proximity (less than 1.2 miles apart, 0.6 mile from each activity) and resulting cumulative effects of these large scale activities. Exceptions

<sup>1</sup> The BLM Habitat Assessment Framework definition of "unsuitable" includes both "disturbed" and "unsuitable" habitats as defined above.

may be provided.

- d. Land in Northeast Wyoming (see Attachment B, Figure 8) that has had sagebrush removed post-1994 (based on Orthophoto interpretation), and not recovered to suitable habitat will be considered disturbed when using the DDCT.

**EXECUTIVE ORDER 2015-4  
ATTACHMENT G**

**Best Management Practices for Soils on Resource Extraction Sites**

1. Get to know the nature of the soil(s) on the site where you are working. Good basic information can be obtained from the Natural Resource Conservation Service Soil Survey and more detailed information can easily be gathered by digging a few soil pits and testing some soil properties on the site (pH, Electrical Conductivity, Texture, Calcium Carbonate content and gravel content).
2. Topsoil should be removed from the site before resource extraction activities and stored in suitable stockpiles to protect this valuable resource from loss or contamination during resource extraction. Topsoil is important to timely site reclamation. Topsoil should be salvaged while at a low moisture content. Avoid mixing A horizons with B horizons if the B horizons are salty and or clayey.
3. Topsoil stockpiles should be located in an area where they will not be disturbed by resource extraction activities or contaminated by foreign or spilled materials. Movement of stockpiles should be kept to a minimum. Stockpiles should be designed to minimize exposure to erosional forces and bury as little undisturbed soil as possible.
4. Upon completion of resource extraction activities or interim reclamation, topsoil should be respread on the disturbed site to approximate original conditions. Vegetation should be reestablished on the replaced soil as quickly as possible to stabilize the site and prevent erosion. Regular monitoring should be conducted to be sure that revegetation and stabilization of the site proceed according to expectations and no site degradation occurs.
5. The use of commercial fertilizers is generally not recommended for native rangeland reestablishment due to the possibility of increased annual weeds. Soil testing should be completed prior to reestablishment of native plants on highly disturbed soils and, if necessary, the appropriate amendments should be used.
6. It is important not to over-estimate the amount of vegetation removal (habitat loss) in a given year.
7. In order to minimize impacts to soil resources, an alternative to large-scale advanced removal of soil is to skim the surface of the soil with a motor patrol between July 1 and March 14. This may be useful or applicable where operational plans are uncertain or where there is a desire to "live-spread" soils at some point in the period of March 14 – July 1.
  - Leave as much root intact as possible.
  - Leave vegetative biomass in wind-rows to reduce wind and water erosion.

8. If unexpected changes in operational plans require vegetation removal between March 14 and July 1, a nest survey shall be completed by a competent biologist within 1 week prior to any vegetation removal in suitable habitat. Results shall be submitted to the appropriate regulatory agency with a copy to Wyoming Game and Fish Department (WGFD). If a nest is discovered, operations will not be allowed to proceed until after July 1 or otherwise approved by WGFD.

Source: Peter Stahl and Jay Norton, Wyoming Reclamation and Restoration Center, University of Wyoming

**EXECUTIVE ORDER 2015-4  
ATTACHMENT H**

**Compensatory Mitigation**

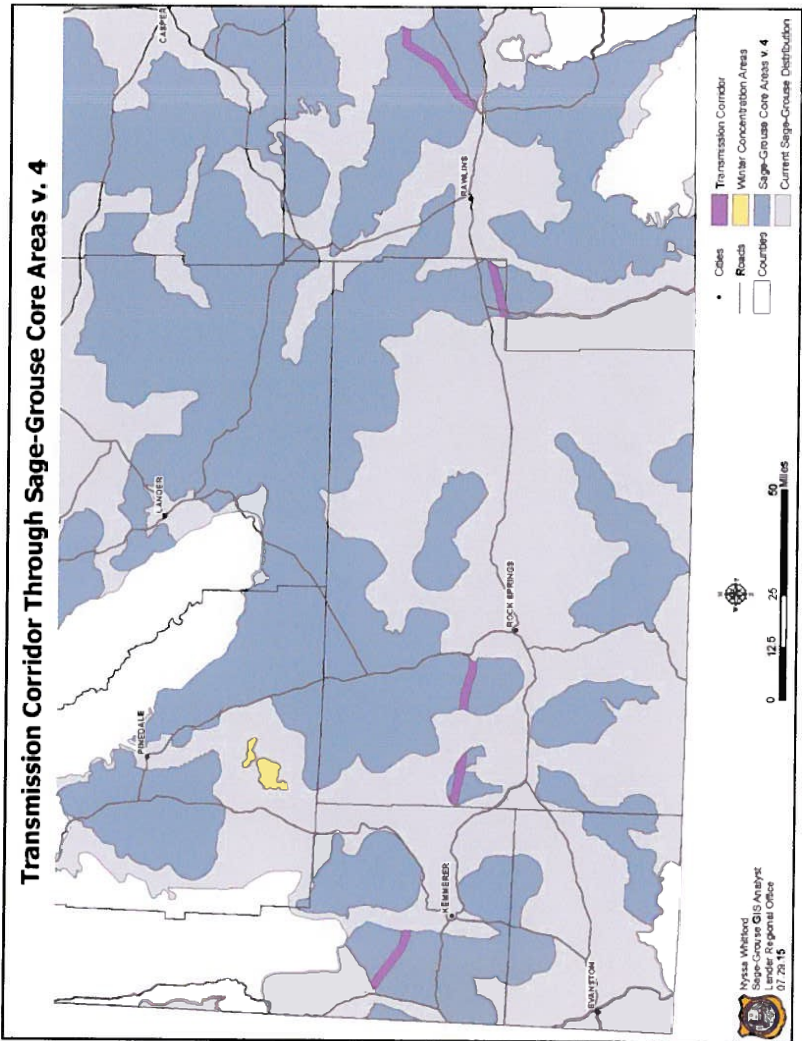
Compensatory mitigation is an essential component of a long-term conservation strategy, where avoidance and minimization are either inadequate or impossible to assure perpetuation of a species of concern. By its nature, compensatory mitigation may be applicable “on-site”, but may often be achieved more effectively “off-site” in order to maintain a landscape-scale result that is beneficial to a species, and not a particular population or group of animals. Compensatory mitigation must be secured prior to any negative impact to a species or its habitat occurs.

Compensatory mitigation that occurs “off-site” should meet the complete life-cycle needs of the species, be secured for an adequate time to assure the replacement of resources that are lost as a result of any negative action impacting the species, and be critically evaluated to provide adequate biological assurances that the initial impact, and any associated mitigation will maintain the species and its habitat until the impact has been removed and the species is recovered at the site of impact. Compensatory mitigation must provide an adequate ratio of assurance that the conservation of the species will not be compromised due to the failure of compensation measures to adequately protect the species, including management changes, natural disasters, and other impacts.

The State of Wyoming recognizes compensatory mitigation as a strategy that should be used when avoidance and minimization are inadequate to protect Core Population Area Greater sage-grouse. Any compensatory mitigation proposal must include approval from the State of Wyoming to assure the species considered is adequately protected, and that the benefits proposed for a species under the jurisdiction of the State of Wyoming are real, adequate, and fully realized prior to the time of acceptance.

**Comment [RG19]:** We believe compensatory mitigation should take place proximate to the site of the disturbance and be additive, durable, and sustainable. Bonding, monitoring components should be included. Such mitigation must demonstrate a substantial benefit to maintaining and increasing habitat and sage grouse populations. Adherence to the mitigation hierarchy is essential with an emphasis on avoidance.

EXECUTIVE ORDER 2015-4  
ATTACHMENT I





WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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**TBGPEA - Wyoming Sage-grouse Executive Order comments**

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**Dave Pellatz** <Dave.Pellatz@tbgpea.org>

Tue, Apr 30, 2019 at 9:06 PM

Reply-To: dave.pellatz@tbgpea.org

To: wgfd.hpp@wyo.gov

April 30, 2019

RE: Wyoming Greater Sage-grouse Executive Order Comments

Dear Governor Gordon,

Thunder Basin Grasslands Prairie Ecosystem Association appreciates the opportunity to provide comment on the Wyoming Greater Sage-grouse Executive Order. The Association is a non-profit organization which provides private landowner leadership in developing a responsible, science-based approach to long-term management of member's lands. The Association has developed an incentives-based conservation strategy which includes greater sage-grouse and seven other species. This strategy was developed in cooperation with the US Fish & Wildlife Service, BLM, USFS, and the Wyoming Game & Fish Department and covers five northeastern Wyoming counties encompassing the Thunder Basin, Newcastle, North Gillette, and Douglas Core areas along with the North Gillette Connectivity area.

The Wyoming Greater Sage-grouse Executive Orders have been, and continue to be, the leading guidance documents for the State, and have been used by other states in the west as the basis for their sage-grouse plans. In addition, the Executive Orders have helped guide federal policy for both BLM and US Forest Service planning efforts. As such, we feel that continuing to provide a background to sage-grouse conservation efforts, as given in some of the Whereas statements and in Appendix A, is important. After reviewing the existing Executive Order, we provide the following suggestions for your consideration. While some of these considerations potentially involve new language, the majority focus on ways to accelerate or encourage development of existing provisions.

Executive Order 2015-4, Paragraph 8, page 5

We encourage the State to more fully develop incentives to accelerate habitat restoration and enhancements in and adjacent to Core Population Areas. While the current focus has been directed towards industry (and additional work could be done to accelerate reclamation of abandoned oil & gas locations), we feel there is significant potential to develop additional programs and incentives for private landowners focusing on sagebrush protection and enhancement. Due to pre-existing energy development and natural disturbances such as wildfire and prairie dogs, most of the Core Population Areas in northeast Wyoming have significant amounts of habitat which could be restored or enhanced. We would encourage the State to use the Association's existing conservation strategy as a springboard to discussion of incentives for restoration and enhancement activities.

Executive Order 2015-4, Paragraph 11, page 5

While recognizing that public and firefighter safety is the priority, effective fire suppression efforts in core are critically important. We encourage the State to take the lead in working with local county fire wardens and rural volunteer firefighters to educate them on the value of protecting sagebrush habitat. Here in northeast Wyoming, most of the firefighters are rural ranchers who may not know the location of sage-grouse core areas. In addition, most don't know how long it takes for sagebrush to return after a wildfire and thus don't realize the importance of preserving existing sagebrush habitat.

Executive Order 2015-4, Paragraph 16, page 6

We encourage the State to take a more active role in encouraging landowner participation in CCAA, CCA, and other conservation programs. While this has been a stated goal in the sage-grouse executive orders since 2010, many state agency employees are still not aware of existing CCAA/CCA efforts nor do they actively encourage landowner participation.

Executive Order 2015-4, Attachment A, "Connectivity Areas", page 5 & Attachment B, "Connectivity Corridors", pages 13-14

Whether in this executive order revision or a future one, we encourage the State to reevaluate the utility and performance of the existing connectivity corridors, namely Buffalo and North Gillette. New information about both northeastern Wyoming and southeastern Montana sage-grouse populations is available now that wasn't when these connectivity areas were first proposed. We continue to believe that providing connection between sage-grouse Management Zones 1 and 2 is extremely important. However, we feel that a robust discussion of habitat connectivity and genetic transfer would help refine the need and future direction for connectivity area locations and necessary protections.

Executive Order 2015-4, Attachment C, Paragraph 14, page 2

While West Nile virus currently appears to have the largest impact in northeastern Wyoming, changing climates may make it an increasing threat across the state. Since it has such a devastating impact on local sage-grouse populations, we encourage the State to develop recommended best practices for mosquito control and explore additional ways to minimize West Nile impacts on sage-grouse.

Executive Order 2015-4, Attachment H; Revised Greater Sage-Grouse Compensatory Mitigation Framework dated July 10, 2017; Executive Order 2018-3

We encourage the State to continue developing the compensatory mitigation system and find ways to encourage the development of additional credit providers. We believe that compensatory mitigation efforts occurring within the areas where the disturbances and loss of habitat are taking place should be incentivized. This may require additional flexibility and innovative approaches but we feel that creating a system where enhancements occur within the same general area as the disturbances will yield the most positive impact for local sage-grouse populations.

Thank you for the opportunity to provide comments on potential changes to the Wyoming Greater Sage-grouse Executive Order. We look forward to continuing to work with the State and other interested parties to utilize best available science in developing and implementing plans and strategies that provide the greatest benefit to sage-grouse in Wyoming.



**Dave Pellatz**  
Executive Director | Conservation Coordinator

Thunder Basin Grasslands Prairie Ecosystem Association  
671 Steinle Road | Douglas, WY 82633 | 307-359-1328

Developing practical, habitat-based approaches to long-term management of lands in northeastern Wyoming



WGFD HPP <wgfd.hpp@wyo.gov>

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## Sage-Grouse EO comments

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**Tom Christiansen** <wygrouse@gmail.com>  
To: wgfd.hpp@wyo.gov

Wed, May 1, 2019 at 3:30 PM


Hello,

Please see the attached comments and distribute as appropriate.

Thank-you.

Tom Christiansen

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 **EO comments 2019-05\_Christiansen.pdf**  
1021K

01 May 2019

The Honorable Mark Gordon  
Governor of Wyoming  
Via electronic mail to: wgfd.hpp@wyo.gov

Dear Governor Gordon,

Thank you for the opportunity to submit comments on the sage-grouse executive order. Your commendable efforts build on the solid foundation originally constructed under Governor Freudenthal's leadership and furthered by Governor Mead and staff. I served as the Wyoming Game and Fish Department's sage-grouse biologist during that time, providing technical support to the Department, the Sage Grouse Implementation Team and the Governor's Office. I continue to maintain interest and standing in retirement.

The Sage-Grouse Executive Order has served as a model for how to engage stakeholders in the effort to achieve landscape (not merely a single species) conservation and sustain the economy of the state. From a conservationist's point of view, the policy is good and certainly an improvement surpassing anything in place prior to 2008. Updating the policy could and should strengthen it to allow it to better achieve its goals. Such action could prove very necessary as it appears Wyoming's sage-grouse populations are not trending positively and, based on my observations and conversations with those working in the field, this spring's lek counts could reflect a population smaller than that present in the mid-1990s; a population level that precipitated the saga of petitions, litigation, decisions and conservation efforts; a population level we had hoped not to revisit. While we can hope for a good crop of grouse chicks hatching in the coming month, that possibility would only provide short-term relief.

It is within that context that I make the following comments, which represent only myself.

1. Consistent with your wise interest in the issue of invasive plants, please consider adding a "therefore" statement following the current statement regarding wildfire. I suggest this language as a starting point:

*Control of invasive plant species should be prioritized within and adjacent to Core Population Areas. Threats posed by invasive plants to wildlife habitat and agricultural production are well-documented and increasing in scope and severity.*

This issue is at the top of the list of rangewide threats to sage-grouse and the sagebrush ecosystem. Yet there are no advocates for cheatgrass or other invasive annual grasses. This issue provides the greatest opportunities for win-win, though expensive, solutions.

2. As I related to you recently in a separate letter, the BLM has leased areas for oil and gas development in the Greater South Pass Core Area that contain the highest density of sage-grouse on Earth. This is not an overstatement as some have made it out to be. The only lek in North America to exceed a count of 300 male sage-grouse over the last decade exists within this area and it is surrounded by leks that routinely support counts of over 100 males (4x the statewide average). While a lease is not a guarantee of development, it is a first step. Unfortunately, the current provisions of the Executive Order would not preclude significant impacts to this population because it would be impossible to site/space anything other than a few individual (likely uneconomical) wells in a manner that would not result in population declines. Leasing and developing on the best sage-grouse habitat on the planet is not consistent with the goals and objectives of the Executive Order.

Now that some of the area is leased options are more limited, but I suggest the topic be more fully considered within the context of the EO revision. Re-adding content from a previous version of the EO would at least address better capturing the impacts such development might have. On page 3 of Attachment B, I suggest the following be added at the end of the "Maximum Density and Disturbance Calculation" section:

*Disturbance is analyzed for the DDCT as a whole and for each individual affected lek within the DDCT.*

3. The current language regarding noise, specifically how it defines "baseline" noise allows for incremental increases in noise over time because this level rises with each new development. This is problematic and indefensible. While we await published information regarding sage-grouse tolerance thresholds, which will simplify the issue, I suggest the following language replace the existing section on noise in Attachment B:

*New project noise levels, either individual or cumulative (as measured by  $L_{50A,0-24}$ ), should not exceed 10 decibels above baseline noise at the perimeter of a lek during the breeding season (March 1 to May 15). The baseline sound level shall be established by using  $L_{90A,0-24}$  metric; this measurement must be done prior to any development, or, if not possible, in a nearby, similar area without development. The monitoring protocol now available from the WGFD shall be used to measure and report sound levels.*

The use of L90 for establishing baseline and L50 for measuring new noise is key to resolving the problematic nature of the current language. Using L50 and L90 is NOT comparing apples to oranges. Concluding such demonstrates a lack of understanding of how noise is measured.

4. I have reviewed the comments already submitted by Skip Ambrose (noise researcher), Audubon Rockies/Wyoming Outdoor Council, and the Southwest Local Sage-Grouse Working Group. I endorse these comments, especially those regarding core/non-core development prioritization, connectivity, mitigation, noise, and data collection and reporting. I re-emphasized some of those comments above but recommend all be carefully considered and incorporated wherever possible.

Thank you for your consideration of these comments and for continuing the legacy and intent of the Sage-Grouse Executive Order process.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tom Christiansen', with a stylized, cursive script.

Tom Christiansen  
WGFD Sage-Grouse Program Coordinator - Retired



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Sage-Grouse Executive Order 2015-4 Comments

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**Linda Baker** <linda@uppergreen.org>  
To: wgfd.hpp@wyo.gov

Tue, Apr 30, 2019 at 3:12 PM

Dear Governor Gordon & Director Nesvik:

Please accept these comments on Sage-grouse Executive Order 2015-4 for your review and consideration.

As a long-time residents of Pinedale, and years of volunteer work on the State-Wide Sage-Grouse Working Group, we have a strong interest in preserving and protecting a robust Greater sage-grouse population in Wyoming.

We appreciate this opportunity to clarify and improve the Wyoming Greater sage-grouse Executive Order. Please do not hesitate to contact us at the address below with any questions or concerns.

Thank you,  
Linda Baker  
Director

--

Linda F. Baker

Upper Green River Alliance

[18 Moose Rd.](#)

[Pinedale, WY 82941](#)

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[linda@uppergreen.org](mailto:linda@uppergreen.org)



**Governor's Recommendations FINAL 4-30-19.pdf**

1132K



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Wyoming Governor Mark Gordon  
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Director Brian Nesvik  
Wyoming Game and Fish Department  
5400 Bishop Boulevard  
Cheyenne, Wyoming 82006  
[wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

April 30, 2019

Re: Wyoming Executive Order (EO) 2015-4

Dear Governor Gordon and Director Nesvik:

Thank you for requesting the public's feedback to inform your review of Wyoming's existing Greater Sage-grouse Executive Order. (The State of Wyoming, 2019) Please accept our suggestions for specific areas that we think need clarification and our reasons for why revision is needed.

Please consider these comments as an addendum to comments submitted previously in coordination with Western Watersheds Project and its partners.

### **Why the Greater Sage-grouse Executive Order Should Be Revised**

The importance of considering noise influences on sage-grouse cannot be overstated. Masking the sounds of communication used by mating Greater sage-grouse has been scientifically shown to deter attendance at their leks, influencing population declines. Grouse use leks to display elaborate acoustic and visual performances to attract and select

mates. They also depend on vocal communication between females and nestlings during brood rearing.

A key research paper from the National Park Service and Colorado State scientists (Barber, 2010) introduces two key, new metrics for measuring the effects of noise on animals. The first, “alerting distance,” is the distance at which sounds can be heard: these may be sounds made by a species to alert others to danger, or sounds made by predators (which prey animals want to hear, so as to take cover). The second is “listening area,” the full area around an animal in which it can hear other animals’ calls, footsteps, and wingbeats. A key insight offered by this approach is that even moderate increases in background noise can drastically reduce an animal’s listening area, and its ability to survive.

### **Ensure the Use of Best Available Science to Establish Baseline Noise**

Wyoming EO 2015-4 specifies Wyoming’s statewide requirements for protecting sage-grouse. Attachment B of EO 2015-4 specifies stipulations for development in identified Core Habitat: “New project noise levels, either individual or cumulative, should not exceed 10 decibels (as measured by L50) above baseline noise at the perimeter of a lek from 6:00 pm to 8:00 am during the breeding season (March 1 to May 15). Specific noise protocols for measurement and stipulations for implementation will be developed as additional research and information emerges.”

To establish *baseline* sound levels, acousticians and bioacousticians (and many local governments) commonly measure decibels (“dBA”), with a standard called “L90.” This is the sound level that is exceeded 90% of the time (or is the quietest 10% of the time) and is the sound measurement that does not include most human-caused sounds.

The *ambient* sound level measures all current sounds, and is characterized by “L50”, which is a median of natural and human-caused sounds.

Best available science established by experts in acoustical measurement recommends the use of L90 to establish baseline noise. “To determine baseline ambient levels, we recommend the use of A-weighted L90 metric. This metric is the most suited for estimating ambient values to set the baseline for management objectives.” (Blickley & Patricelli, 2012)

We request that Executive Order 2015-4 recognizes best available acoustical science and is clarified to state that the L50 sound level at the perimeter of the lek is measured against the baseline L90 level prior to development. In addition, the L50 sound level at the perimeter of the monitored lek should not exceed 10 dBA over the L90 level.

## **Establish Baseline Noise Values**

In the twelve years since the first Greater sage-grouse core area protections were signed by Governor Freudenthal in 2007, bioacousticians have conducted ground-breaking sound studies in Wyoming and published peer-reviewed research. Executive Order 2015-4 suggests that better sage-grouse management will be achieved, “as additional research and information emerges.” (The State of Wyoming, 2019) It is time the State of Wyoming recognizes precedent-setting sound studies and implements science-based noise standards.

In a state/federal study, the Pinedale Office of the Bureau of Land Management (BLM) and the State of Wyoming have established baseline noise levels at sage-grouse leks in the Upper Green River Valley. BLM and the Wyoming Game and Fish Dept. contracted with professional bioacousticians to document specific noise conditions within the Pinedale Anticline Project Area (PAPA) and chosen reference areas. One of the objectives of this study was to determine baseline sound levels at sage-grouse leks in undisturbed sagebrush habitat. (Ambrose, Florian, & MacDonald, 2014)

At the three reference leks in the 2013 study for the time period 0000-0500, a time not influenced by grouse display sounds, the baseline sound level (L90) was 14.2 dBA.

The *Sound Levels* study clearly indicated that baseline noise levels at sage-grouse leks in undisturbed sagebrush habitat in the Upper Green River Valley were 14.2 dBA.

At the BLM Pinedale Anticline Annual Meeting on April 25, 2019, a noise monitoring update was provided. During this public meeting, bioacousticians stated that noise monitoring in Wyoming indicates that the L90 noise level at sage-grouse leks in undisturbed sagebrush habitat is 14 dBA. It was also noted that approved sound monitoring equipment used in the Pinedale Anticline study is not sensitive enough to record sound levels less than 14 dBA, but it is likely that baseline noise is actually lower.

Because sage-grouse habitats are rapidly being developed for oil and gas on public lands in Wyoming, we emphasize the urgency of EO 2015-4 language clarification to establish baseline noise values.

To underscore the urgent need of this request, we point to the largest, potential source of new noise levels in important sage-grouse habitat in Western Wyoming: the Normally Pressured Lance Gas Project (NPL). The BLM approved this project without a clear, state directive on what level constitutes baseline noise. The NPL DEIS stated that, “The ambient noise levels monitored at Sage-Grouse leks in the Project Area and presented in this EIS are

not intended to serve as the baseline for assessing noise increase thresholds for site-specific permitting and development.” (USDI BLM, 2017, pp. 3-105)

Instead of baseline, BLM used ambient noise levels against which to measure new noise, and wrote that, “ambient noise levels measured for the NPL Project represent the best available existing information for characterizing the noise environment at Sage-Grouse leks in the Project Area.” BLM incorrectly determined that ambient noise is an “overall minor influence.” (USDI BLM, 2017, pp. 3-106)

The danger to sage-grouse currently occupying habitat in the NPL is an increase of noise far exceeding protective standards, potentially causing population declines on leks and in winter concentration areas.

While additional sound monitoring may be suggested for Wyoming, we recommend that Executive Order 2015-4 be clarified to state that baseline noise in Wyoming is established at 14 dBA, and may be revised if more sensitive sound recorders become standardized equipment.

### **The Current Noise Level Ceiling Does Not Protect Sage-Grouse**

Executive Order 2015-4 states that, “New project noise levels, either individual or cumulative, should not exceed 10 decibels ... above baseline noise at the perimeter of a lek.”

On public lands managed by the BLM, the agency has established a noise baseline of 39 dBA, which sets the noise level ceiling at 49 dBA. This value originated in a 1971 U.S. Environmental Protection Agency (EPA) report from a single, afternoon measurement from a farm in Camarillo, California. (Patricelli G. L., 2013) The farm is described in the report as: “Rural agricultural near tomato field; 50 yards to the trees around the yard and dwelling area; 160 yds to Walnut Ave., a lightly travelled surface road; 0.6 mi to State Hwy 118, a 2-lane moderately travelled highway; 0.6 mi to LeLeror Ave. and 0.75 mi to La Vista Ave, both lightly travelled surface roads; 3.5 mi to Santa Paula Freeway; 3.6 mi to the Ventura Freeway; 4.5 mi to Camarillo. The major intruding events were created by jet propeller aircraft flyovers and dogs barking. Other intruding events were background traffic noise.... During the day an orchard pruner in the distance controlled the minimum noise level.”

This single, 48-year-old, California farm noise level broadly used to establish all baseline noise on lands managed by BLM was obviously much louder than undisturbed sage-grouse habitat in Wyoming.

In fact, our understanding of noise impacts to sage-grouse have improved in recent years. Studies in Wyoming indicate that sage-grouse populations decrease as fossil gas is developed and noise increases in important habitats. "Peak male attendance relative to the baseline was lower on noise leks than paired control leks... (73% decrease in abundance compared with paired controls). These decreases were immediate and sustained." (Blickley, Blackwood, & Patricelli, 2012)

At the BLM Pinedale Anticline (PA) Annual Meeting on April 25, 2019, professional bioacousticians stated that when sound levels exceeded 24 dBA on the PA, sage-grouse lek attendance fell by 89%.

In previous Pinedale Anticline noise studies, on sage-grouse lek complexes with the most noise, sage-grouse lek attendance also dropped dramatically. In 2009, in the development complex called Duke's Triangle, lek attendance fell by 41% and in 2012 lek attendance fell by 60%, compared to the previous two-year averages.

Once Executive Order 2015-4 establishes correct baseline noise values, we recommend that it maintains a noise level ceiling that is not to exceed 10 decibels above baseline, which would make the noise level ceiling 24 decibels. This is a standard more protective of Wyoming sage-grouse populations in core areas.

### **Revise Specific Noise Protocols for Measurement**

Equipment must be capable of measuring the entire the acoustic environment experienced by Greater sage-grouse, and measurement periods must be long enough that natural variations in the acoustic environment are captured. The following basic standards are recommended for data collection:

- Microphone height should be 0.3 m (12") to ensure that measurements capture acoustic conditions experienced by greater sage-grouse.
- Sound level meters should be capable of capturing the full range of sounds (12.5-20,000 Hz) and sound levels (<10 dBA to >80 dBA) experienced by Greater sage-grouse, and should be capable of measuring very low-level sound common in Wyoming sagebrush (<10 dBA).
- Measurement periods should be long enough to capture normal acoustic variation due to seasonal and metrological conditions (estimated 14 days but needs further study). Continuous recordings should be collected during the entire measurement period to allow for source identification of all sounds.

Metrics relevant to sage-grouse management should be as follows:

- The L90 metric, as measured in sagebrush far from gas field activities (>5 km), shall be used to establish *baseline* sound levels.

- The L50 metric, as measured at the perimeter of the lek, shall be used to assess impacts to sage-grouse, and shall not exceed 10 dBA over the L90 baseline sound level.

Again, thank you for this opportunity to provide feedback on the Greater Sage-grouse Executive Order. We appreciate your forward-looking, progressive stance on protecting and enhancing our Greater sage-grouse populations. Please contact us with any questions or concerns.

Sincerely,

A handwritten signature in blue ink that reads "Linda F Baker". The script is cursive and fluid.

Linda F Baker  
Director

## References

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- Patricelli, G. L. (2013). Recommended management strategies to limit anthropogenic noise impacts on greater sage-grouse in Wyoming. *Human–Wildlife Interactions*, 7(2), 230–249.
- The State of Wyoming. (2019). *Wyoming Game and Fish Department*. Retrieved from Wyoming Game and Fish Department: <https://wgfd.wyo.gov/Habitat/Sage-Grouse-Management/Sage-Grouse-Executive-Order>
- USDI BLM. (2017). *Normally Pressured Lance Natural Gas Development Project Draft Environmental Impact Statement*. Rock Springs, Wyoming: United States Department of the Interior Bureau of Land Management.



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## SGEO comments

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**Melanie Purcell** <mpurcell@sublettecd.com>

Mon, Apr 22, 2019 at 9:06 AM

To: wgfd.hpp@wyo.gov

Hello,

Thank you for the opportunity to comments on the Wyoming Sage Grouse Executive Order. Attached are comments submitted by the Upper Green River Basin Sage Grouse Local Work Group. Have a wonderful day!

--

*Respectfully,  
Melanie J. Purcell*

Wildlife & Habitat Program Manager

SUBLETTE COUNTY CONSERVATION DISTRICT

1625 W. Pine St. PO Box 647

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**UpperGreenRiverSGLWG\_SGEO 2019 Updates\_Comment Letter\_April 18.2019.pdf**

716K

April 18, 2019

The Honorable Mark Gordon  
Governor of Wyoming  
Idelman Mansion  
2323 Carey Ave.  
Cheyenne, WY 82002-0010

Sent via electronic facsimile to: [wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

From: Upper Green River Basin Sage Grouse Local Work Group

RE: Wyoming Greater Sage-Grouse Executive Order Public Input Request

Dear Governor Gordon,

Thank you for the opportunity to comment on the Wyoming Greater Sage-Grouse Core Area Protection Strategy (EO 2015-4). We appreciate the State's efforts to maintain and enhance sage-grouse populations and their habitats while allowing opportunities for responsible resource development. Upon review of the SGEO, the Upper Green River Basin Sage Grouse Local Work Group (UGRBSGLWG) identified the following recommendations for your consideration:

1. Page 1-3 E.O, Whereas statement to be included.  
**Non-Core areas will not be considered sacrifice areas, and we recommend that the SGIT review the goals for Non-Core Population Areas.**

The UGRBSGLWG requests that the Governor's Sage Grouse Implementation Team review the goals for Non-Core populations of sage-grouse. Local biologists are finding that bird activity no longer exists on several occupied leks in Non-Core Population Areas as a result of encroachment from development activities. We believe these areas still need to be maintained, to the extent possible, in order to provide habitat connectivity and genetic dispersal between Core Area populations.

2. Now, Therefore numbered statement requested on page 6 of the E.O.  
**Control of invasive plant species should be emphasized within and adjacent to Core Population Areas. The pervasive threats posed by invasive plants to wildlife habitat and agricultural production are well-documented and increasing in scope and severity.**

Our local work group continues to support invasive species control efforts, in particular annual invasive grasses such as cheatgrass, which is a major threat to native sagebrush habitats across the west. It is imperative that the State support such efforts in the Core Area strategy, thus a statement is requested to emphasize such activities.

3. Requested new heading under Attachment B, page 5, general stipulations.  
**Insert a new section under general stipulations that addresses surface disturbance activities for WCA (Core and Non-core) between December 1 – March 14.**

Winter Concentration Area mapping is taking place across Wyoming and some of these may be in Core Area while others may be in Non-Core Area. While Core Population Areas are intended to

capture all seasonal requirements for sage-grouse, the policy currently only addresses seasonal stipulations for the nesting and early brood rearing season. Wyoming winters can be harsh and wildlife often need to conserve energy to survive the season. Disturbance can cause additional stress during this critical time, therefore a general stipulation addressing surface disturbance activities during winter is needed until further science is available.

4. Attachment C, page 1; Attachment B, page 6 and page 8 (paragraph 2).  
**Consistency and clarification should be sought on "de minimus" activity of powerlines to adhere to Core Area Strategy NSO.**

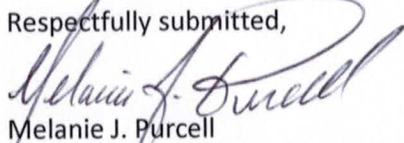
There appears to be inconsistency associated with "de minimus" activities between these sections. Attachment C indicates that distribution lines within 0.6 miles from an occupied lek are "de minimus" provided construction meets timing stipulations, is not on the lek itself, and a habitat evaluation has occurred. However, this appears to contradict Attachment B language regarding NSO for powerlines on page 6 and the new transmission line discussion on page 8.

5. Attachment H.  
**Compensatory mitigation shall be as close as possible to the disturbance.**

Compensatory mitigation procedures are currently being developed within the State of Wyoming. The UGRBSGLWG feels strongly that emphasis should be placed on conducting compensatory mitigation in areas that are in close proximity to the associated disturbance. Disturbance activities whereby compensatory mitigation is needed for a sage-grouse population should attempt to benefit the same population of birds if possible.

Thank you for your time and consideration. If you have any questions regarding the comments or need further explanation, please contact Melanie Purcell, UGRBLWG Chair at 307-367-2257 ext. 117 or [mpurcell@sublettecd.com](mailto:mpurcell@sublettecd.com).

Respectfully submitted,



Melanie J. Purcell

Chair, Upper Green River Basin Sage Grouse Local Work Group

**Upper Green River Basin Sage-grouse Working Group Members:**

Bob Barrett, Sportsman  
Dean Clause, Wyoming Game & Fish Department  
John Dahlke, Wyoming Wildlife Consultants, LLC  
Aimee Davison, Blue Wing Consulting, LLC  
Pete Guernsey, General Public  
Jennifer Hayward, Natural Resources Conservation Service  
Rusty Kaiser, United States Forest Service, Big Piney Ranger District  
Melanie Purcell, Sublette County Conservation District  
Albert Sommers, Agriculture/Rancher & State Legislature  
Erika Tokarz, Ultra Petroleum Corporation  
Dale Woolwine, Bureau of Land Management, Pinedale Field Office



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Upper Green River Conservancy Comments to SGEO

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**Rob Wallace** <rwallace@i2capitalcorp.com>

Wed, May 1, 2019 at 2:12 PM

To: wgfd.hpp@wyo.gov

Cc: Bob Budd &lt;bob.budd@wyo.gov&gt;

Dear Wyoming G&amp;F -

Attached please find comments on the sage grouse executive order respectfully submitted by the Upper Green River Conservancy.

Thank you,

Rob Wallace



**Rob Wallace**  
**President**  
**Upper Green River Conservancy**  
**P:** 202.744.6961  
**E:** [rwallace@i2capitalcorp.com](mailto:rwallace@i2capitalcorp.com)  
**W:** [www.uppergreenriver.com](http://www.uppergreenriver.com)



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**UGRC Comments on SGEO 190501 EX.pdf**  
140K



April 30, 2019

Governor Mark Gordon  
Idelman Mansion  
2323 Cary Avenue  
Cheyenne WY 82002-0010

CC: Wyoming Game & Fish Department  
Mr. Bob Budd, Chairman, Sage Grouse Implementation Team

RE: Sage Grouse Executive Order

Dear Governor Gordon:

The Upper Green River Conservancy appreciates the opportunity to comment on the Greater Sage-Grouse Executive Order ("SGEO"). We support the goals of the SGEO and strongly believe that effective compensatory mitigation, together with avoidance and minimization, provide the critical components of a robust conservation solution that avoids a listing of the Greater sage-grouse ("GSG").

We offer the following comments:

1. Compensatory mitigation providers ("Mitigation Providers") and the industry operators supported by the GSG compensatory mitigation program (the "Program") require a scientifically and legally defensible approach that ensures impacts are substantially and demonstrably offset.
2. The Program should limit specific compensatory mitigation projects to the geographic distribution of the population of sage-grouse impacted by an activity for which those projects are being used to offset. Geographic proximity is necessary to maintain the distribution of GSG throughout the State, which is in turn critical to maintain meta-population dynamics (e.g., genetic heterogeneity) and robust populations in Wyoming.
3. The Program should establish a level-playing field that holds all type of mitigation to the same standard whether provided by for-profit organizations and landowners, non-profit organizations, habitat exchanges, in-lieu-fee programs or public agencies.



UPPER GREEN RIVER CONSERVANCY

4. The agency in charge of implementing the Program should closely coordinate with Federal land management agencies, and establish a clear requirement for State Program adherence on projects that occur on Federal lands. Such coordination will ensure that all impacts are appropriated accounted for (e.g., modifications, waivers and/or exceptions development stipulations) and effectively mitigated.
5. To ensure long-term State of Wyoming authority, the Program should be authorized by the Wyoming Legislature -- as a division of a State Agency, an office within the Office of the Governor, or a part of the Wyoming Wildlife and Natural Resources Trust. Further, the Program should have a separate budget with adequate funds and trained personnel to support effective administration.
6. The Program should be designed to allow wide-spread participation. Such participation is predicated on reasonable stipulations for survey and monitoring levels, financial assurances, and long-term liabilities, along with a pragmatic approach to addressing occurrences out of the Mitigation Provider's control (e.g., natural disasters, effects of climate change, duration of the offsets, etc.).
7. The Program should: reward the participation of landowners who have not signed up for traditional conservation programs; take into account the potential effects of climate change on GSG populations and incentivize remediation of retired infrastructure. These overlapping goals are best served by a Program that includes a mix of term and permanent mitigation. Traditional conservation programs tend to rely exclusively on permanent mitigation. However, permanent mitigation has several key weaknesses in the GSG context:
  - a. Permanent mitigation leads to low levels of participation by many landowners who otherwise would be rewarded for stewardship of their lands. A program that allows for temporary mitigation would offer significantly greater access to Wyoming landowners.
  - b. Permanent mitigation also ignore the effect of climate change on GSG habitat. Over time, it is highly likely that GSG habitat will shift across the landscape and current habitat may not provide suitable conditions in the future.



UPPER GREEN RIVER CONSERVANCY

- c. Permanent mitigation does not encourage timely remediation of impacts by developers, since the developer would have already paid to offset a permanent impact. The duration of term mitigation should be at least equal to the expected duration of the impact, to include the expected time for the impacted site to become occupied by GSG following remediation. This approach of matching duration of impact with duration of offset would create a strong incentive for developers to remediate their sites before their mitigation expires.

Sincerely,

Rob Wallace  
President  
Upper Green River Conservancy  
rwallace@i2capitalcorp.com



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

## RE: Public Input

Joseph Bohne &lt;jbohne@silverstar.com&gt;

Wed, May 1, 2019 at 7:17 AM

To: Leslie Schreiber &lt;leslie.schreiber@wyo.gov&gt;, wgfd.hpp@wyo.gov

Attached is the Upper Snake River Working Group's review of the EO 2015. We trust HPP will transmit out concerns and suggested changes intact to the Governor's office. Since the direction was somewhat unclear we used the existing document as a template for our review. Combining input from a number of sources was daunting so the edited version includes an effort to format the response and all track changes have been retained to clarify the review to get to the nitty-gritty of the working group's input which is included in red text. We appreciate the opportunity to review the document and offer suggestions to improve and/or protect the intent of the existing EO and to point out the need to include new information in a few sections of the document. (Leslie: please advise if this is still the correct destination for the working group's input.)

Sincerely Joe Bohne, Chair USBWG

Joe Bohne

Chair, Upper Snake river Sage-grouse Working Group

P.O. Box 3056

Alpine WY.

Jbohne @Silverstar.com

Home phone: 307 654-7865

Cell : 307 690-6827

**From:** Leslie Schreiber <leslie.schreiber@wyo.gov>

**Sent:** Tuesday, February 26, 2019 8:54 AM

**To:** [abernathytl@hotmail.com](mailto:abernathytl@hotmail.com); Armond Acri <[anacri\\_wy@msn.com](mailto:anacri_wy@msn.com)>; [mickasbell@gmail.com](mailto:mickasbell@gmail.com); David Baer <[baerdavid7@gmail.com](mailto:baerdavid7@gmail.com)>; Mike Baker <[winterh@rtconnect.net](mailto:winterh@rtconnect.net)>; [bbinwyo@hotmail.com](mailto:bbinwyo@hotmail.com); [lbeckworth@tcweed.org](mailto:lbeckworth@tcweed.org); Bryan Bedrosian <[bryan@tetonraptorcenter.org](mailto:bryan@tetonraptorcenter.org)>; [tberdan@blm.gov](mailto:tberdan@blm.gov); Jack Berger <[bergerdiana@yahoo.com](mailto:bergerdiana@yahoo.com)>; Justin Binfet <[justin.binfet@wyo.gov](mailto:justin.binfet@wyo.gov)>; [vwbird@bvea.net](mailto:vwbird@bvea.net); Marvin Blakesley <[marvinb@gga-inc.com](mailto:marvinb@gga-inc.com)>; [fblomqui@blm.gov](mailto:fblomqui@blm.gov); Joseph Bohne <[jbohne@silverstar.com](mailto:jbohne@silverstar.com)>; [barbarb@bresnan.net](mailto:barbarb@bresnan.net); Robert Brug <[robertbrug@gmail.com](mailto:robertbrug@gmail.com)>; [tbyer@fs.fed.us](mailto:tbyer@fs.fed.us); [Geneva\\_Chong@usgs.gov](mailto:Geneva_Chong@usgs.gov); Dean Clause <[dean.clause@wyo.gov](mailto:dean.clause@wyo.gov)>; [eric\\_cole@fws.gov](mailto:eric_cole@fws.gov); Aly Courtemanch <[alyson.courtemanch@wyo.gov](mailto:alyson.courtemanch@wyo.gov)>; [cox.saratoga@gmail.com](mailto:cox.saratoga@gmail.com); [johnd@wyowildlife.com](mailto:johnd@wyowildlife.com); Rick Danvir <[basinwlc@gmail.com](mailto:basinwlc@gmail.com)>; [bluewing.adavison@gmail.com](mailto:bluewing.adavison@gmail.com); [charles.engstrom@bp.com](mailto:charles.engstrom@bp.com); John Espy <[jrespy@tribcsp.com](mailto:jrespy@tribcsp.com)>; [colleen.faber@anadarko.com](mailto:colleen.faber@anadarko.com); [rfieldgrove@fnbofwyo.com](mailto:rfieldgrove@fnbofwyo.com); [garrett3607@gmail.com](mailto:garrett3607@gmail.com); [morgan@tetonconservation.org](mailto:morgan@tetonconservation.org); [peteguerns@aol.com](mailto:peteguerns@aol.com); Keith Hamilton <[keithhamilton2@hotmail.com](mailto:keithhamilton2@hotmail.com)>; [harshbarger@agristar.net](mailto:harshbarger@agristar.net); Stan Harter <[stan.harter@wyo.gov](mailto:stan.harter@wyo.gov)>; [dustin.havel@jhairport.org](mailto:dustin.havel@jhairport.org); [jim.haverkamp@wy.usda.gov](mailto:jim.haverkamp@wy.usda.gov); [jennifer.hayward@wy.usda.gov](mailto:jennifer.hayward@wy.usda.gov); Larry Heiser <[Larry@westernsagecpas.com](mailto:Larry@westernsagecpas.com)>; [todd@medbowcd.org](mailto:todd@medbowcd.org); Hnilicka, Pat ([pat\\_hnilicka@fws.gov](mailto:pat_hnilicka@fws.gov)) <[Pat\\_Hnilicka@fws.gov](mailto:Pat_Hnilicka@fws.gov)>; [aholloran@audubon.org](mailto:aholloran@audubon.org); [Paul.Jibson@questar.com](mailto:Paul.Jibson@questar.com); [tracyj@precorp.coop](mailto:tracyj@precorp.coop); [rkaiser@fs.fed.us](mailto:rkaiser@fs.fed.us); Rory Karhu <[rory.karhu@wy.usda.gov](mailto:rory.karhu@wy.usda.gov)>; [kotm@sweet.wy.us](mailto:kotm@sweet.wy.us); [rkrumm@fiberpipe.net](mailto:rkrumm@fiberpipe.net); [bigblacklabs@icloud.com](mailto:bigblacklabs@icloud.com); [g75lovel@blm.gov](mailto:g75lovel@blm.gov); Vance Lungren <[vancel@rtconnect.net](mailto:vancel@rtconnect.net)>; Julie L <[julie.lutz@genlp.com](mailto:julie.lutz@genlp.com)>; Jonathan Madill <[jmadill@wyoben.com](mailto:jmadill@wyoben.com)>; [stmartin@wyoming.com](mailto:stmartin@wyoming.com); [diamondhranch@wildblue.net](mailto:diamondhranch@wildblue.net); Joan McGraw <[joan@medbowcd.org](mailto:joan@medbowcd.org)>; [Allison.McKenzie@wy.usda.gov](mailto:Allison.McKenzie@wy.usda.gov); [bostheim@blm.gov](mailto:bostheim@blm.gov); [Parsons82@msn.com](mailto:Parsons82@msn.com); Pfister, Chris <[lasher@wildblue.net](mailto:lasher@wildblue.net)>; [falconstrike1@live.com](mailto:falconstrike1@live.com); Justin Proffer <[jproffer@blm.gov](mailto:jproffer@blm.gov)>; Melanie Purcell <[mpurcell@sublettecd.com](mailto:mpurcell@sublettecd.com)>; Leslie Schreiber <[leslie.schreiber@wyo.gov](mailto:leslie.schreiber@wyo.gov)>; Stacey Scott <[hustace@gmail.com](mailto:hustace@gmail.com)>; [Mark.Shirley@wy.usda.gov](mailto:Mark.Shirley@wy.usda.gov); [irishrose@gmail.com](mailto:irishrose@gmail.com); [hsmith@tetonwyo.org](mailto:hsmith@tetonwyo.org); [albert@sommersranch.com](mailto:albert@sommersranch.com); [spurrierms@yahoo.com](mailto:spurrierms@yahoo.com); Tim Stephens

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<mark.zornes@wyo.gov>; Teal Joseph <teal.cufau@wyo.gov>

**Subject:** Fwd: Public Input

LWG Members,

In case you did not receive Karen Rogers' 2/21 email regarding sage-grouse executive order updates, I am forwarding it here:

Cheers!  
Leslie

----- Forwarded message -----

From: **Karen Rogers** <karen.rogers1@wyo.gov>  
Date: Thu, Feb 21, 2019 at 2:30 PM  
Subject: Public Input  
To: WGF-SGITNotification <wgf-sgitnotification@wyo.gov>

Greetings,

As discussed at the last SGIT meeting, Governor Gordon is interested in suggestions that may be used to update the Sage-Grouse Executive Order (SGEO). Sage-Grouse Implementation Team Chairman Bob Budd asks to please use the existing SGEO as the base document to work from. Rather than word-smithing it, we recommend you focus on pointing out the specific areas that you think need clarification and explain why. We ask that you please explain the issues you see with the content and be specific as to what section or page number you're referring to. Comments are due by April 8th and should be submitted to [wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov).

This information has been posted to the website on both the [SGEO](#) and [SGIT](#) pages.

Thank you,

Karen

--

Karen Rogers, GISP

President, [WyGEO](#)

President-Elect, [NSGIC](#)

Habitat Protection Analyst

Habitat Protection Program

Wyoming Game and Fish Department

[5400 Bishop Blvd.](#)

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***Conserving Wildlife, Serving People***

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

--

**Leslie Schreiber**, Certified Wildlife Biologist®

Sage-grouse/Sagebrush Biologist

Wyoming Game & Fish Dept.

[231 Pheasant Dr](#)

[Greybull, WY 82426](#)

office: (307) 765-2445

[Leslie.Schreiber@wyo.gov](mailto:Leslie.Schreiber@wyo.gov)

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.



**SageGrouseExecOrder2015-7\_USRBWG\_comments\_28Apr2019.docx**  
5094K

April 28, 2019

Thank you for your consideration of our comments in support of strengthening Executive Order 2015-4(7) to maintain and increase Greater sage-grouse populations and habitats to preclude listing as an endangered species in Wyoming.

Summary: We support Executive Order 2015-4(7) (EO) because we believe that enforcement and improvement of the Order's stipulations and management guidance can maintain and increase Greater sage-grouse populations and habitats to preclude listing as an endangered species in Wyoming. Wyoming's core area management approach provided the foundation for the Federal plan that allowed Greater sage-grouse to avoid being listed as endangered. Fundamentally, the core area policy was not intended to deal with leasing and development in core areas that have high densities of birds. Therefore, we do not support a weakening of the EO to reduce Wyoming Greater sage-grouse management to the Federal management level that currently emphasizes energy development **over population stability and growth**, including in core areas such as the "Golden Triangle", ~~over population stability and growth~~. To preclude the need for listing, we are providing specific comments to support the strengthening of the EO to compensate for changes in Federal management and incorporate new knowledge and management opportunities into stipulations and guidance.

Background: We supported the Executive Order in the past because, in conjunction with Department of Interior management of Federal public lands for protection of Greater sage-grouse, particularly **with reference to for** energy development, we believed the intent to conserve Sage Grouse in Wyoming could be achieved with diligent implementation and improvement of the Executive Order and Federal protections over time. Recent events, such as the decision to allow leases in the "Golden Triangle," cause us to question the ability of the Executive Order to protect Greater sage-grouse sufficiently to prevent it becoming warranted for listing under the Endangered Species Act. The Executive Order says that State and Federal agencies will encourage projects outside the Core Area. Tom Christiansen commented in a letter to the Governor "Oil and gas development in areas with the densities of birds present in the "Golden Triangle," even with core area stipulations applied, will have proportionally greater impacts than in core areas supporting lower densities." Actions speak louder than words, and this decision alone likely foreshadows the inability of the Executive Order to conserve Greater sage-grouse in Wyoming unless the Core Area policy is strengthened and enforced. **Energy development is not a benign use of the land and negative impacts to sage-grouse populations have almost always been demonstrated in past research studies.**

The Upper Snake River Basin Local Working Group **offers the following critique and suggestions to improve the existing Executive Order.**

MATTHEW H. MEAD  
GOVERNOR



STATE CAPITOL  
CHEYENNE, WY 82002

## Office of the Governor

### STATE OF WYOMING EXECUTIVE DEPARTMENT EXECUTIVE ORDER

Order 2015-4  
(Replaces 2011-5 and 2013-3)

#### GREATER SAGE-GROUSE CORE AREA PROTECTION

**WHEREAS**, the State of Wyoming is proud of its rich wildlife heritage and is one of few states remaining in the United States where wildlife exist in great abundance; and

**WHEREAS**, the Greater sage-grouse (*Centrocercus urophasianus*), an iconic western species, inhabits much of the sagebrush-steppe habitat in Wyoming; and

**WHEREAS**, the sagebrush-steppe habitat type is abundant across the State of Wyoming; and

**WHEREAS**, the State of Wyoming currently has the greatest population of Greater sage-grouse across the range; and

**WHEREAS**, the State of Wyoming has management authority over Greater sage-grouse populations in Wyoming; and

**WHEREAS**, the United States Department of the Interior has determined that listing the Greater sage-grouse range-wide as a threatened or endangered species is currently precluded making it a candidate species; and

**Whereas** the best way to avoid listing is to not just maintain populations, but to increase them, the goal is to do more than maintain current populations; and

**WHEREAS**, in response to the U.S. Fish and Wildlife Service finding under Listing Factor D, the State of Wyoming and partner federal, state and local agencies have developed and put into place a comprehensive and effective set of regulatory mechanisms designed to conserve the Greater sage-grouse; and

**WHEREAS**, it is the desire of the State of Wyoming and it is in the best interest of the State and the Greater sage-grouse that Wyoming maintain legal primacy for this species; and

**WHEREAS**, the State of Wyoming continues to be committed both logistically and financially to conserving the Greater sage-grouse [and increasing populations](#); and

Executive Order 2015-4

PHONE: (307) 777-7434

P h i 632-3909

**WHEREAS**, the State of Wyoming recognizes the necessity of a robust and scientifically rigorous system of monitoring; and

**WHEREAS**, agencies of the State of Wyoming have established oversight mechanisms and implemented management stipulations in compliance with this and previous Executive Orders; and

**WHEREAS**, the listing of the Greater sage-grouse would have a significant, adverse effect on the land and natural resource management of the State of Wyoming beyond that necessary to maintain and enhance Greater sage-grouse populations and habitat; and

**WHEREAS**, the listing of the Greater sage-grouse would have a significant, adverse effect on the economy of the State of Wyoming, including the ability to generate revenues from State lands; and

**WHEREAS**, the listing of the Greater sage-grouse would have a significant, adverse effect on the custom and culture of the State of Wyoming, and would substantially obstruct and conflict with ongoing and effective collaborative efforts to conserve Greater sage-grouse; and

**WHEREAS**, the Wyoming State Legislature, federal, state and local agencies, industry, conservation organizations, and landowners have dedicated significant time and resources to conserve Greater sage-grouse populations in Wyoming; and

**WHEREAS**, in order to maintain and enhance Greater sage-grouse populations and adequate sagebrush-steppe habitat, the State of Wyoming has developed and implemented a Greater sage-grouse Core Area Protection strategy; and

**WHEREAS**, this Executive Order is the State of Wyoming's primary regulatory mechanism to conserve the Greater sage-grouse and preclude the need for listing the bird as a threatened or endangered species pursuant to the Endangered Species Act of 1973; and

**WHEREAS**, the Sage-Grouse Implementation Team serves as the oversight team in implementing this Executive Order and the Wyoming State Legislature established the Team as a statutory body (W.S. § 9-19-101) to provide recommendations regarding regulatory actions necessary to maintain and enhance Greater sage-grouse populations and habitats in Wyoming; and

Whereas the state will maintain Local Area Working Groups that will provide local-based information and feedback to the Sage-Grouse Implementation Team: and

**WHEREAS**, The goal of Wyoming's Greater sage-grouse Core Area Protection strategy is to protect significant quantity and quality of Greater sage-grouse habitat and protects a substantial portion of Wyoming's Greater sage-grouse; and

Please update and add statements to reflect up-to-the-the most recent decision USDI and the Service: **WHEREAS**, on April 17, 2008, the Office of the Governor requested that the U.S. Fish and Wildlife Service review Wyoming's Greater sage-grouse Core Area Protection strategy

to determine whether it was a "sound policy that should be moved forward" and on May 7, 2008, the U.S. Fish and Wildlife Service responded that the "core population area strategy... is a sound framework for a policy by which to conserve Greater sage-grouse in Wyoming"; and

**Update to reflect new position of DOI regarding leasing for energy development and any other updates for changes in other agency management decisions, particularly where revisions are inconsistent with this EO to the detriment of sage-grouse.**

**WHEREAS**, in its March 23, 2010 status determination for the Greater sage-grouse (Decision; 75 Federal Register 13910, 13974) the U.S. Fish and Wildlife Service stated, "the Service believes that the core area strategy[,] if implemented by all landowners via regulatory mechanisms, would provide adequate protection for sage-grouse and their habitats in that State[;]" and

**WHEREAS**, in a letter dated November 10, 2010, the U.S. Fish and Wildlife Service again confirmed that "[t]his long-term, science-based vision for the conservation of Greater sage-grouse has set the stage for similar conservation efforts across the species range," and that "the Core Population Area strategy for the Greater sage-grouse provides an excellent model for meaningful conservation of Greater sage-grouse if fully supported and implemented"; and

**Update to reflect new position of DOI regarding leasing for energy development and any other updates for changes in other agency management decisions, particularly where revisions are inconsistent with this EO to the detriment of sage-grouse.** **WHEREAS**, the State of Wyoming, the Bureau of Land Management, the U.S. Forest Service, and other land management agencies have coordinated Greater sage-grouse Core Area Protection conservation actions across their boundaries which encompass approximately 15 million acres of habitat for the Greater sage-grouse in Wyoming; and

**Update to reflect new position of DOI regarding leasing for energy development and any other updates for changes in other agency management decisions, particularly where revisions are inconsistent with this EO to the detriment of sage-grouse.** **WHEREAS**, federal land management agencies including the Bureau of Land Management and the U.S. Forest Service are revising or amending their respective Land and Resource Management Plans consistent with this Executive Order to prioritize conservation of Greater sage-grouse and their habitats; and

**WHEREAS**, Candidate Conservation Agreements with Assurances (CCAA) through the U.S. Fish and Wildlife Service and the Sage-Grouse Initiative (SGI) through the Natural Resources Conservation Service on private lands, complemented by Candidate Conservation Agreements (CCA) on public lands, are a proven means of investing in the future of rural land management; and

**WHEREAS**, significant investments of both time and money have been made by all stakeholders to see the successful implementation of the Greater sage-grouse Core Area Protection strategy; and

**WHEREAS**, science, information, and data continue to emerge regarding the habitats and behaviors of the Greater sage-grouse; and

**WHEREAS**, the review process built into Wyoming's Greater sage-grouse Core Area Protection strategy provides a mechanism to evaluate this emerging science, information, and data and has

Executive Order 2015-4

Page 4 of 7

resulted in updated management recommendations from the Sage-Grouse Implementation Team.

**NOW, THEREFORE**, in consideration of the recommendations of the Sage-Grouse Implementation Team and pursuant to the authority vested in me by the Constitution and Laws of the State, and to the extent such actions are consistent with the statutory obligations and authority of each individual agency, including those found in the Wyoming Regulatory Takings Act, W.S. §§ 9-5-301 through 9-5-305, I, Matthew H. Mead, Governor of the State of Wyoming, do hereby issue this Executive Order providing as follows:

1. State agencies shall strive ~~to~~ maintain consistency by following the procedures outlined in this Executive Order, while recognizing that adjustments to the stipulations may be necessary based upon local conditions, opportunities, and limitations. The goal is to minimize future disturbance by co-locating proposed disturbances within areas already disturbed or naturally unsuitable. Define unsuitable, and clarify if non-restorable to suitable. For example, areas precluded from classification as core because they were already leased or developed could become suitable habitat again in the future (e.g., the Powder River Basin of WY).

2. Valid existing rights shall be recognized and respected. Activities existing or permitted in Core Population Areas prior to August 1, 2008, will not be required to be managed under Core Population Area stipulations. Activities existing or permitted prior to the date of this Executive Order and within Core Population Areas added as a result of this Executive Order will not be required to be managed under Core Population Area stipulations (see Attachment A, Figure 2). Examples of existing activities include oil and gas, mining, agriculture, processing facilities, housing, and other uses that were in place prior to the development of the Core Population Areas. Federal and state permitted activities, within a defined project boundary (such as a recognized federal oil and gas unit, drilling and spacing unit, mine plan, subdivision plat, utility ROW, grazing allotment etc.), shall be allowed to continue within the existing boundary even if the use exceeds recommended stipulations (see Attachment A, Figure 1). Allotment management plans on federal and state lands should recognize the habitat requirements of sage-grouse and provide direction to the land management agency and the permittee to evaluate the status of sage-grouse habitat in the allotment and move grazing practices and livestock use towards achieving sage-grouse habitat objectives if necessary. (See Stiver, et al. 2010, Sage-grouse Habitat Assessment Framework and Cagney et. al. 2010, Grazing influence, management, and objective development in Wyoming's Greater Sage-grouse).

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3. It is critical that existing land uses and landowner activities continue to occur in Core Population Areas, particularly agricultural activities on private lands. Functioning ranches and agricultural lands provide crucial ecological and habitat services to wildlife. The failure or loss of these areas could have damaging implications to wildlife and their habitats. The loss of these important lands in their current status and role(s) could impact conservation objectives for Greater sage-grouse and other species (USFWS, February 5, 2015, Memo to State Directors and Field Supervisors: Service Position on Livestock Grazing and Working with the Rangeland Owners to Conserve Sage-Grouse).

4. ~~Rephrase this assertion and allow updates to Core Population Area maps using new information such as for wintering areas and connectivity. As stated the assertion is too bold.~~ For the most part, activities on private lands are not subject to state or federal agency review or approval. Only those activities which state agencies are required by state or federal law to review or approve are subject to review for consistency. Core Population Areas have been updated to include additional habitat beyond that strictly necessary to prevent the listing of Greater sage-grouse. The additional habitat included within the Core Population Area boundaries is adequate to accommodate continuation of existing land uses and landowner activities. Rephrase this assertion and allow updates to Core Population Area maps using new information such as for wintering areas and connectivity. As stated, the assertion is too bold and unsupported by any data or studies known to this group. Existing land uses and landowner activities deemed to have negligible or no impacts to Greater

sage-grouse are exempt from review for consistency under this Executive Order (see Attachment C).

5. Land uses and activities proposed inside Core Population Areas for which stipulations have not been developed in this Executive Order may be authorized on a case-by-case basis only when it can be demonstrated to the satisfaction of the permitting agency, and based upon recommendations made by the Wyoming Game and Fish Department, that the activity will avoid negative impacts to Greater sage-grouse. **Monitoring will be done to verify that there is no impact. If populations decline, activity- (should be) will be suspended until populations recover.**
6. **Add Wyoming Game and Fish Department.** Regulatory agencies and departments of the State of Wyoming including, but not limited to, the Office of State Land and Investments, Department of Environmental Quality, State

Engineer's Office, Industrial Siting Council and the Oil and Gas Conservation Commission, shall prioritize the maintenance and enhancement of Greater sage-grouse habitats and populations inside the Core Population Areas, connectivity areas, and winter concentration areas identified in Attachment A, Figure 1.

7. Development consistent with the stipulations set forth in Attachment B shall be ~~monitored deemed sufficient~~ to demonstrate that the activity will avoid negative impacts to Greater sage- grouse.
8. Incentives to accelerate or enhance required reclamation in habitats adjacent to or within Core Population Areas should be developed, including but not limited to stipulation waivers, funding for enhanced reclamation, and other strategies. It is recognized that some incentives may result in reduced numbers of Greater sage-grouse outside of Core Population Areas.
9. Where consistent with the Greater sage-grouse conservation goals set forth herein, a non-regulatory approach should be used to influence management actions and activities within Core Population Areas. Permit stipulations should reflect unique localized conditions, including soils, vegetation, development type, predation, climate, and other local realities.
10. Wyoming is managing approximately 15 million acres of Core Population Area habitat to maintain high quality Greater sage-grouse habitat and maintain and enhance populations within normal variability.
11. Fire suppression efforts in Core Population Areas should be emphasized, recognizing that other local, regional, and national suppression priorities may take precedence. Public and firefighter safety remains the number one priority for all fire management activities.
12. **Identify who will develop standards.** The State of Wyoming will support research of activities in winter concentration areas where biologically significant numbers of Greater sage-grouse nesting in Core Population Areas are suspected of congregating. Further, the State of Wyoming will develop appropriate local, science-based standards to manage disturbance in identified and mapped winter concentration areas (see Attachment A, Figure 1). **However, how will these standards be applied to areas already leased since the EO states in an earlier section that existing valid rights will be respected and not subject to the EO stipulations**
13. **The State of Wyoming will identity and recognize important migration and connectivity corridors to maintain genetic viability and to reduce potential local-area population declines caused by loss of genetic variability in Core Population Areas. Further, the State of Wyoming will support programs designed to bolster genetic variability of Core Area Population areas when warranted by low effective population sizes, high inbreeding coeffecients, and/or low genetic variability as defined by scientific research**

~~13.~~14.

To ensure continued sustainability of Wyoming's economy, all efforts to encourage, enhance, and prioritize development outside of Core Population Areas shall be made. State and federal agencies, with other relevant stakeholders, should work collaboratively to develop a strategic plan to achieve a  
Executive Order 2015-4  
Page 8 of 7

beneficial balance between Greater sage-grouse protection and Wyoming's economy. Incentives , prioritization of projects outside of Core Population Areas, and streamlining permit processes should be considered.

14.15. State and federal agencies, including the U.S. Fish and Wildlife Service, Bureau of Land Management, U.S. Forest Service, Wyoming Game and Fish Department, and other stakeholders shall work collaboratively to ensure a uniform and consistent application of

this Executive Order to maintain and enhance Greater sage-grouse habitats and populations.

- ~~15~~16. Recommend listing the most pertinent state agencies. Potentially list specific staff serving as primary points of contact. State agencies shall work collaboratively with all appropriate stakeholders to maintain and enhance Greater sage-grouse habitats and populations consistent with the language and spirit of this Executive Order.
- ~~16~~17. The State of Wyoming will support voluntary enrollment and expanded coverage for conservation easements, CCAA, CCA, and commensurate improvements and investments by the U.S. Department of Agriculture and the U.S. Fish and Wildlife Service, where appropriate. These efforts should be focused and prioritized to take place in Core Population Areas.
- ~~17~~18. Local Working Groups will continue to be engaged through the Local Working Group Charter and have representation on the Sage Grouse Implementation Team.
- ~~18~~19. The State of Wyoming will engage in adaptive management that will include the involvement of state and federal land management and regulatory agencies as appropriate (see Attachment B).
20. Which state agencies? To whom will they report? How would Local Working Groups, state agencies, or private citizens obtain a list or detailed description of conservation and permitted actions? State agencies shall report all conservation and permitted actions occurring within Greater sage-grouse Core Population Areas annually, or more frequently, as determined necessary.
- ~~19~~21. The State of Wyoming shall work with federal, state, county, private and non-governmental organization partners to collect data to determine the condition of each Core Population Area in relationship to the goals of the Wyoming's Greater sage-grouse Core Area Protection strategy.
- ~~20~~22. Absent substantial and compelling information that adjustments are necessary to protect the integrity of the Greater sage-grouse Core Area Protection strategy, these Core Population Areas, connectivity areas, identified and mapped winter concentration areas, and protective stipulations identified in this Executive Order shall not be altered for a minimum of 7 years.
- ~~21~~23. The State of Wyoming shall continue to monitor and document Greater sage-grouse populations and development activities to ensure that permitted activities under this authority do not result in negative impacts to Greater sage-grouse outside cyclical trends.
- ~~22~~24. 2019 public records legislation appropriated \$125k appointed for a governor appointed ombudsman to handle public records grievances. Who would be the equivalent state employee in administration of this EO. It could be argued that many individuals and agencies are participating in the EO, but there is no captain, synthesizing data/information in a way that would allow for detection of meaningful trends. Not sure this is possible for one person to do, but potentially a role for the Sage-Grouse and Sagebrush Biologist (SGSB). Recommend

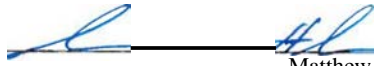
adding SGSB to SGIT, in addition to agency wildlife biologists with sage-grouse expertise.

This Executive Order, together with its attachments, constitutes Wyoming's strategy for the conservation of the Greater sage-grouse and their habitats. Attachments A through I

are expressly adopted and incorporated by reference herein, and each shall have the full force and effect of this Executive Order.

Given under my hand and the Executive Seal of the State of Wyoming this 29 day of July, 2015.



  
Matthew H. Mead  
Governor

EXECUTIVE ORDER 2015-4  
ATTACHMENT A

Figure 1.

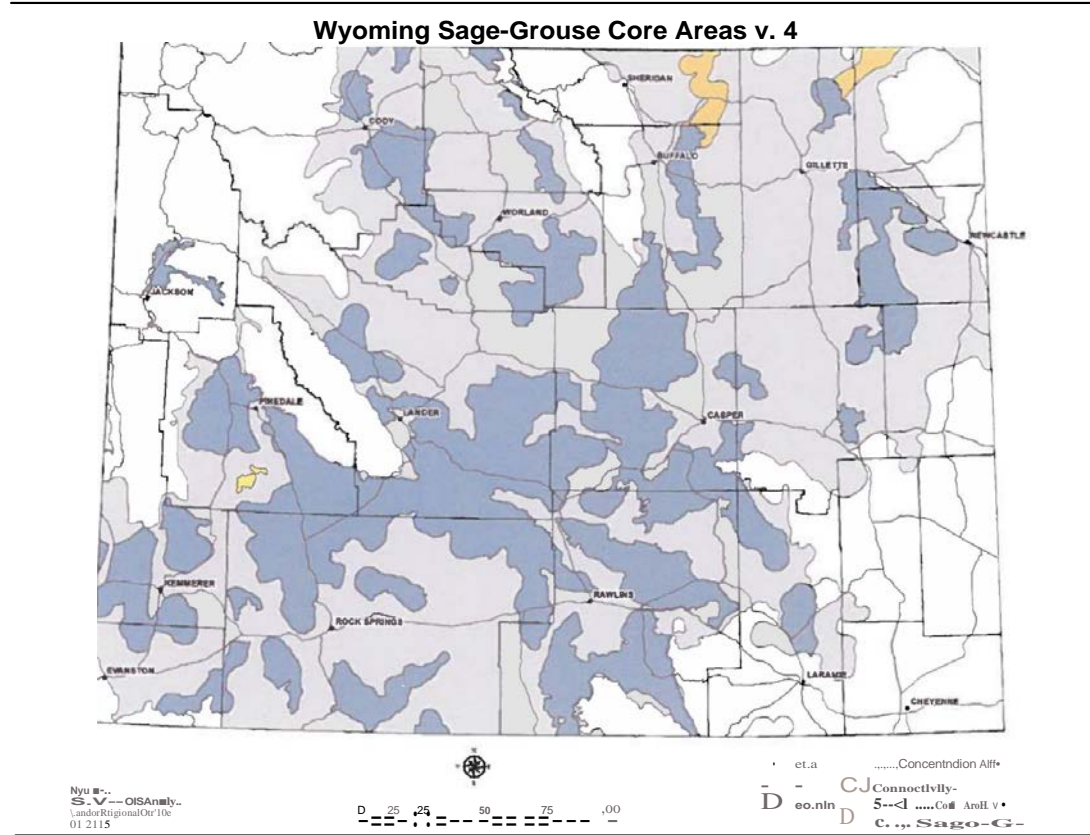
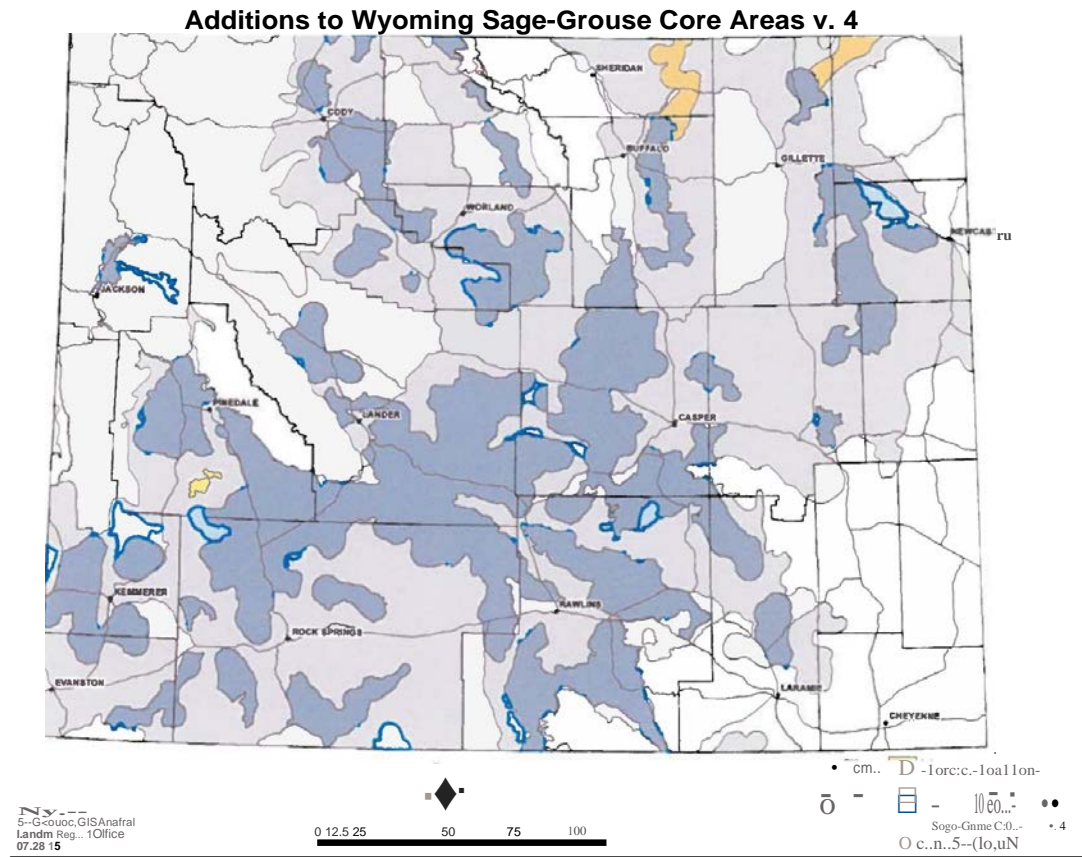


Figure 2.



## **HOW THE WYOMING GREATER SAGE-GROUSE CORE AREA PROTECTION STRATEGY WAS DEVELOPED**

Beginning in 2007, the Sage Grouse Implementation Team was charged with three primary tasks: (1) identification of areas where Greater sage-grouse and their habitats would be most effectively conserved, (2) development of a strategy to reduce or eliminate potential threats to the species, and (3) development of methodology to evaluate, document and track potential impacts over time. The following describes those efforts to date.

### **1. Establishment of Greater Sage-Grouse Core Population Areas**

Greater sage-grouse lek location and attendance data as identified through modeling of bird populations and habitat were overlaid with areas of valid existing rights to produce the Greater sage-grouse Core Population Area map for Wyoming (Figure 3). This iterative process consisted of a series of reviews conducted in the field by Local Working Group (LWG) and others with a thorough understanding of local Greater sage-grouse use to assure that areas included as core habitat were a true representation of actual conditions on the ground. Similar processes were used in 2010 (Figure 4) and 2015 (Figure 5) to refine the Core Population Area mapping, resulting in the current Core Population Areas.

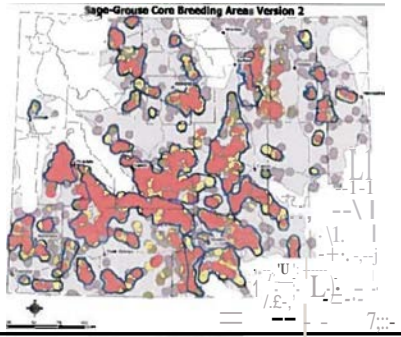


Figure 3. Greater sage-grouse breeding density and Core Population Areas (Version 2) associated with Executive Order 2008-2.

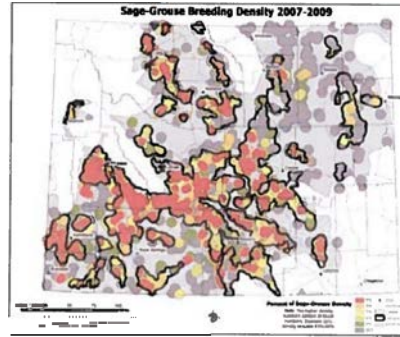


Figure 4. Greater sage-grouse breeding density and Core Population Areas (Version 3) associated with Executive Orders 2010-4 and 2011-5.

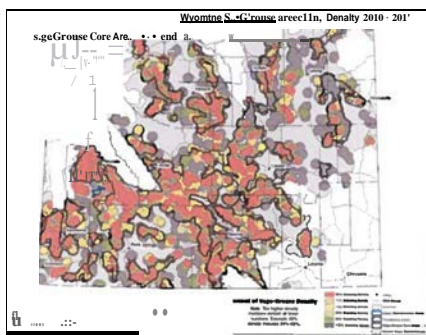


Figure 5. Greater sage-grouse breeding density and Core Population Areas (Version 4) associated with Executive Order 2015-4.

A kernel density function was applied to the lek location and attendance data to develop the final Greater sage-grouse density maps and later adjustments (Doherty et al. 2010, 2011). The red areas on Figures 3 and 4 represent the breeding habitat for 65% of Greater sage-grouse in Wyoming based on lek size and location. The maps illustrate population proportions at a given time, not trends over time. This method was based on breeding birds and did not take into account late brood-rearing and wintering seasonal habitats. During the 2010 revision of Core Population Area boundaries in Wyoming, both late brood-rearing and winter use were considered in the process and most of these seasonal habitats associated with birds in the existing Core Population Area were included in the final product (Figure 4). The eight LWGs assisted in the revision process by using highly-detailed habitat imagery (1 meter NAIP) and reviewing new

lek and development data. These activities were open to the public and other interests throughout the process.

The resultant 2008, 2010 and 2015 (Figures 3, 4, and 5) Core Population Areas encompass approximately 83% of the Greater sage-grouse population, on approximately 24% of the surface area of the State of Wyoming (unpublished data, Wyoming Game and Fish Department, Garono et al. 2013). **The core areas are lek centric in nature and not all important winter habitat for birds using breeding habitat associated with leks in core areas is included and protected with stipulations to minimize activities in winter habitat beyond simple timing stipulations applied during the winter.**

### Connectivity Areas

Connectivity corridors are recognized as areas important for maintaining the transmission of genetic material between populations. These corridors have been identified as the most likely dispersal routes used by Greater sage-grouse to travel between potentially isolated populations in Wyoming to populations in neighboring states. Viable corridors reduce the threat of creating isolated populations in Wyoming and adjacent populations in neighboring states. Connectivity corridors are managed to limit anthropogenic development and have been delineated to increase the likelihood of natural immigration/emigration important for maintaining genetic variability in Core Population Areas.

### Winter Concentration Areas

**Define** How winter concentration areas (WCAs) tracked, modified, and amended? There are no recognized WCAs in the Upper Snake River Basin, but there are areas documented to have over 50 grouse. What is the process for formalizing the designation?

The identification of Core Population Areas is intended to capture all seasonal requirements for Greater sage-grouse; however, there is a recognition that in some cases Core Population Areas may not capture all Greater sage-grouse needs (Aldridge and Boyce 2007, Doherty et al. 2008, Doherty et al. 2011). Specifically, winter concentration areas, defined as places where large numbers of Core Population Area Greater sage-grouse congregate and persistently occupy between December 1 and March 14, should be identified and protected. Identification of winter concentration areas should be based on habitat features and repeated observations of winter use by biologically significant numbers of Greater sage-grouse (e.g., groups of greater than equal to 50 Greater sage- grouse) using a validated Resource Selection Function (RSF) modeling approach. This threshold fails to recognize that small populations of grouse may be found using winter habitat in groups with less than 50 birds due to the fragmented nature of sagebrush habitat with available sagebrush **during a normal or extreme winter** but these birds are biologically significant to the maintenance of that population. The Jackson Hole population is typical of this situation and available winter habitat is a limiting factor for this population and all winter habitat should be protected. Winter use can be variable in some areas from year to year depending on snow deposition. We suggest a minimum threshold of 20 birds is more appropriate and in some situation all known winter habitat on public lands should be protected. ~~of  $\geq$  50 Greater sage- grouse) using a validated Resource Selection Function (RSF) modeling approach.~~

## **2. Management Goals and Mitigation in the Greater Sage-Grouse Core Area Protection Strategy**

The Wyoming Greater sage-grouse Core Area Protection strategy represents a proactive identification of a set of conservation actions to maintain and enhance a viable and connected set of populations before the opportunity to do so is lost (Doherty et al 2011). The strategy is based on the identification of important habitat areas for Greater sage-grouse and a set of actions that when taken are intended to ensure the long-term survival of Greater sage-grouse populations in Wyoming. The strategy follows an established hierarchy of *avoidance*, understanding that the primary mission is avoiding impacts to and protecting the best remaining habitat for Greater sage-grouse; *minimizing* impacts where they cannot first be avoided; and when Core Population Area thresholds are exceeded, *compensating* for any unavoidable impacts to Greater sage-grouse.

## Avoidance

Preferred development plans avoid negative impacts in Core Population Areas and other Executive Order delineated habitats used by Core Population Area Greater sage-grouse. This maximizes protections for both Greater sage-grouse and sagebrush habitat. Avoidance can be both spatial and temporal.

## Minimization

When development occurs within Core Population Areas and other Executive Order delineated habitats used by Core Population Area Greater sage-grouse, all reasonable options are pursued to minimize impacting additional suitable habitat and/or maintaining impacts below identifiable thresholds to the greatest extent possible. This may result in new disturbance within Core Population Areas, but the disturbance is managed not to exceed Executive Order thresholds and result in no discernible impacts at the population level. Development plans are managed to limit disturbance to less than 5% and no more than an average of one oil and gas pad or mining site per 640 acres within the Density Disturbance Calculation Tool (DDCT) project area. Since this is a lek-centric analysis and breeding habitat may not be symmetrically located around the lek, the DDCT may not capture substantial areas of important nesting habitat associated with the lek. It also offers no protection for birds migrating from seasonal ranges around the lek in the core area to other seasonal ranges not in core areas (examples: the Clark Draw lek and breeding/nesting birds in the Hoback Basin are; not in a core area, but these birds that winter in (Meadow Canyon) a core area north of Big Piney; and the lek and breeding/nesting birds in the Union Pass area are ; not in a core area but these birds ,that winter on the Green River west of the Mesa in a core area. While these migratory groups of birds are small in number their unique adaptations to distant seasonal ranges is important to the overall population because they provide some diversity in seasonal habitats which can have adaptive value. The migratory and-a behavior and habitat selection, that if lost may never be re-established again.

Monitoring will be done to verify that there is no decline in the affected local population. If there is a decline, the activity (should) will cease or be mitigated until populations recover.

## Compensation

The complexity of developing compensatory mitigation projects that provide biologically meaningful benefits to Greater sage-grouse populations requires rigorous standards for mitigation to be defined and developed. Performance standards (e.g., net benefit to Greater sage-grouse), monitoring requirements, and adaptive management plans should explicitly link landscape conservation actions to Core Population Areas and other Executive Order delineated habitats used by Core Population Area Greater sage-grouse and statewide landscape conservation objectives for Greater sage-grouse. See also Attachment H. Mitigation is only valid if it offsets birds and habitat lost due to development and is located in the general area or subpopulation affected by development. A conservation easement alone is not

adequate mitigation for lost birds as it produces no additional birds.

### **3. Use of the DDCT in Managing the Greater Sage-Grouse Core Area Protection Strategy**

A 4-mile radius around active leks captures 74-80% of nesting females associated within their lek of breeding. The 4-mile distance has been confirmed by multiple studies as having particular importance to Greater sage-grouse in the West, including the majority of seasonal habitats associated with an individual lek, and falls within a reasonable range of buffers (Manier et al. 2014) for Greater sage-grouse. This radius accounts for all types of disturbance within the background of measurable impacts to Greater sage-grouse in field studies. By using the 4-mile radius, the DDCT achieves both a realistic consideration of impacts in a relevant assessment area, while avoiding dilution of existing disturbance being considered in conjunction with any one proposed development.

The core area policy is lek-centric and may not capture winter habitat of migratory populations that move between winter range and breeding areas. All leks should be identified with intensive surveys before the assumption that the impacted local subpopulation is adequately identified and analyzed. Where lek survey data is adequate, the DDCT analysis probably is as good as can be- practically expected.



### **Core Population Area Monitoring and Management:**

A system of interagency coordination has been developed to monitor and track development and conservation activities across Core Population Areas to determine whether development actually meets the thresholds of this Executive Order (see Attachment B).

### ***Literature Cited:***

- Aldridge, C. L. and M. S. Boyce. 2007. Linking occurrence and fitness to persistence: habitat-based approach for endangered greater sage-grouse. *Ecological Applications* 117:508-526.
- Doherty, K. E., O. E. Naugle, B. L. Walker, and J.M. Graham. 2008. Greater sage-grouse winter habitat selection and energy development. *Journal of Wildlife Management* 72:187-195.
- Doherty K.E., J.O. Tack, J.S. Evans, and D.E. Naugle. 2010. Breeding densities of Greater sage-grouse: A tool for range-wide conservation planning. BLM Completion Report: Interagency Agreement# L10PG0091 1. Bureau of Land Management. Washington, O.C.
- Doherty, K. E., D. E. Naugle, H. E. Copeland, A. Pocerwicz, and **J.M.** Kiesecker. 2011. Energy development and conservation tradeoffs; systematic planning for Greater sage-grouse in their eastern range. Pp. 505-516 *in* S. T. Knick and J. W. Connelly (editors). Greater sage-grouse: ecology and conservation of a landscape species and its habitats. *Studies in Avian Biology* (vol. 38). University of California Press, Berkeley, CA.
- Garno, R. S., J. D. Carlisle, J. L. Beck, J.C. Bernard, and M. E. Herget. 2013. Can the greater sage-grouse serve as an umbrella species for other sagebrush-dependent wildlife? *The Wildlife Professional*.
- Manier, D.J., Bowen, Z.H., Brooks, M.L., Casazza, M.L., Coates, P.S., Deibert, P.A., Hanser, S.E., and Johnson, D.H., 2014, Conservation buffer distance estimates for Greater Sage-Grouse-A review: U.S. Geological Survey Open-File Report 2014-1239, 14 p., <http://dx.doi.org/10.3133/ofr20141239>.
- USFWS. 2014. Greater Sage-Grouse Range-Wide Mitigation Framework v. 1.0

**EXECUTIVE ORDER 2015-4  
ATTACHMENT B**

**Permitting Process and Stipulations for Development in  
Greater Sage-Grouse Core Population Areas**

**PERMITTING PROCESS**

The revised E.O. needs to add actions for winter and connectivity in appendix B including surface occupancy – timing stipulations are ineffective if change is persistent. (Reminder we couldn't get Upper Green connectivity added to our core area.) Values of populations that are outside core need to be recognized because persistence was assumed – non-core. Non-core needed to achieve/maintain connectivity. Address in surface occupancy not just timing stipulations. Reclamation is achievement of function (adequate sagebrush restoration) not just having a plan for reclamation. Winter concentration area designation should not depend on absolute number of birds (even in core). Hard to define – value input of local working group.

**Point of Contact**

The density of disruptive activities (1/640) and surface disturbance (5%) will be analyzed via the Density/Disturbance Calculation Tool (DDCT), and will be conducted by the Federal Land Management Agency or project proponent (as determined by the BLM Field Office Manager) on federal surface/mineral and the project proponent on non-federal (private, state). The DDCT analysis is then evaluated against Executive Order 2015-4 thresholds.

When State agency permit is needed, without a need for a federal permit:

The first point of contact for addressing Greater sage-grouse Core Population Area issues for any state permit application should be the Wyoming Game and Fish Department (WGFD). Project proponents should contact WGFD at least 45-60 days prior to submitting their application. More complex projects will require more time. It is understood that WGFD has a role of consultation, recommendation, and facilitation, and has no authority to either approve or deny the project. The purpose of the initial consultation with the WGFD is to become familiar with the project proposal and ensure the project proponent understands the DDCT and recommended stipulations. Project proponents need to have a thorough description of their project and identify the potential effects on Greater sage-grouse prior to submitting an application to the permitting agency.

When Federal agency permit is needed, with or without a State permit:

When a project requires federal action prior to approval, the proponent should contact the federal agency responsible for reviewing the action. The federal agency and the proponent will determine the best process for completing the DDCT and receiving recommendations from WGFD. Project proponents need to have a thorough description of their project and identify the potential effects on Greater sage-grouse prior to submitting an application to the permitting agency (see Attachment D).

**Maximum Density and Disturbance Process**

Density and Disturbance Calculation: The DDCT, ([ddct.wygisc.org](http://ddct.wygisc.org)), is a spatially based tool that calculates both the average density of disruptive activities and total surface disturbance within the area affected by the project, or DDCT assessment area. The DDCT assessment area is created based on an initial radius around projects proposed in Greater sage-grouse Core Population Areas (Doherty et al. 2011), and subsequent radius around any occupied, Core

Population Area leks within the initial radius (see Figures I - 2). A 4-mile radius is used to identify 75% of the Greater sage-grouse use around a lek (Walker et al. 2007, Fedy et al. 2012). Any portion of the analysis area not found in core is removed (see Figure 3). All activities will be evaluated within the context of maximum allowable disturbance (disturbance percentages, location and number of disturbances) of suitable Greater sage-grouse habitat (see Attachment F for definition of suitable Greater sage-grouse habitat and disturbance of suitable Greater sage-grouse habitat) within the DDCT assessment area (see Figure 4). This tool allows for better siting of projects rather than averaging the density/disturbance calculation per section.

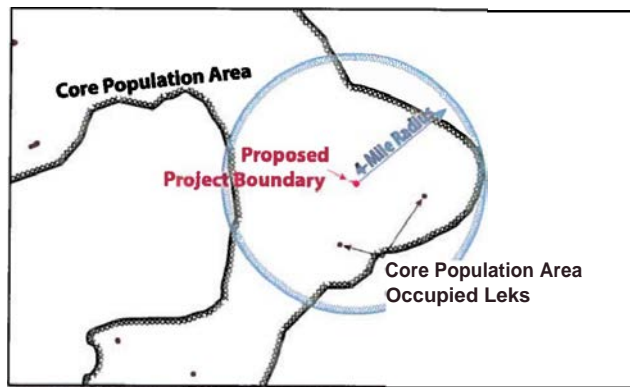


Figure 1 - DDCT assessment area step I, proposed project boundary.

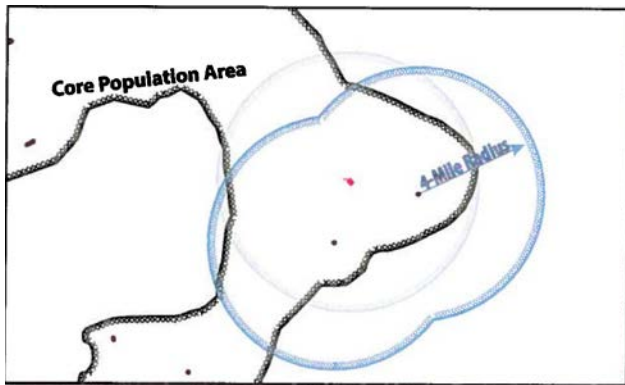


Figure 2 - DDCT assessment area step 2, lek boundaries.

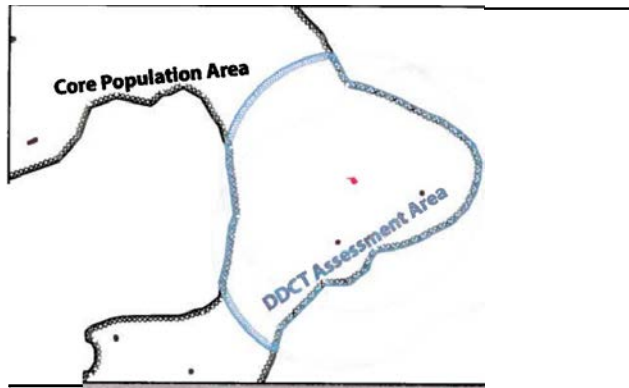


Figure 3 - DDCT assessment area step 3, remove non-core population areas.

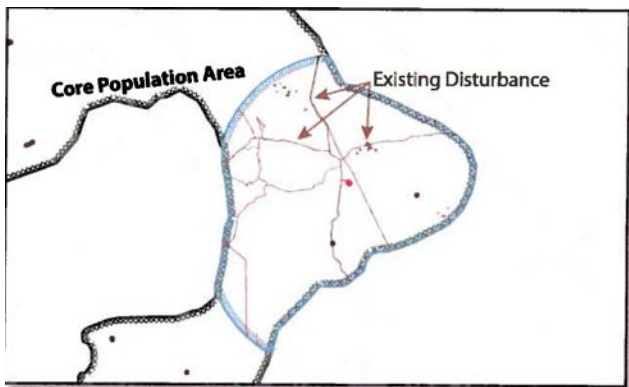


Figure 4 - Existing and proposed disturbance in the DDCT assessment area.

All lands within Core Population Area boundaries are considered suitable habitat unless documented. Mapped unsuitable habitat is treated as neither suitable habitat, nor disturbance, which results in the area being removed from the DDCT assessment area altogether.

Density and disturbance analysis: The total number of discrete disruptive activity features, as well as the total disturbance acres within the DDCT assessment area will be determined through an evaluation of:

- Existing disturbance (Greater sage-grouse habitat that is disturbed due to existing anthropogenic activity and wildfire).
- Approved permits (that have approval for on the ground activity) not yet implemented.

- Validation of the digitized disturbance through on the ground evaluation.

### **Avoiding and Minimizing Impacts**

See Attachment A.

The following is the suggested administrative process for avoiding and minimizing impacts, as necessary.

For valid existing rights: If the proposed project DDCT is at or above Executive Order thresholds, the project proponent, WGFD and the permitting agency must determine whether or not there are ways to avoid or minimize impacts to Greater sage-grouse before issuing a permit to proceed.

The proponent will work with the permitting agency to site the project within the permit/lease area in a way that will likely have the least amount of impact on local Greater sage-grouse populations (i.e., existing anthropogenic disturbance, geographically remote from Greater sage-grouse habitat, unsuitable habitats). The surface disturbance and disruptive activity resulting from the proposed project will still count towards the 5% disturbance and 1/640 density thresholds (unless the proponent can show that there is a 0.6 mile buffer of unsuitable habitat between the proposed disturbance and suitable habitat). It is understood that project locations are often resource specific and that certain projects may not be able to be relocated to another location.

The proponent and the permitting agency will evaluate the DDCT area and the affected Greater sage-grouse Core Population Area for areas where additional reclamation/restoration actions or management of invasive species (especially within the proponents permit/lease area(s)) could reduce the amount of overall disturbance.

The proponent and the permitting agency should consider other opportunities to improve Greater sage-grouse habitat (i.e., conservation easements, additional reclamation of disturbed habitats in suitable habitats that are no longer necessary).

Should the proponent and the state permitting agency not come to agreement; the Sage Grouse Implementation Team (SGIT) will review the information. The BLM and U.S. Forest Service both have their own appeal process to handle disagreements but may coordinate through the SGIT.

### **Permitting**

The complete analysis package (DDCT results, map book, and worksheet), and recommendations developed by consultation and review outlined herein will be forwarded to the appropriate permitting agency(s). WGFD recommendations will be included, as will other

recommendations from project proponents and other appropriate agencies. Project proponent shall have access to all information used in developing recommendations. Where possible and when requested by the project proponent, State agencies shall provide the project proponent with potential development alternatives other than those contained in the project proposal.

If the permit for which a proponent has applied expires, another DDCT analysis is required before issuing a new permit. An additional DDCT is not required for Permit extensions or renewals when no changes are being authorized.

The Executive Order in effect at the time of a complete formal application will remain in effect through the final permit.

Projects that have formally applied for a permit (e.g., CPCN, CUP, NOA, NOi, Initiation of scoping, other permits, or other official public action declaring the project, etc.) should comply with the Executive Order in effect when the project application was made. It is recognized that project planning and permitting can take years to move to a final permit.

### **EXEMPT ACTIVITIES**

A list of exempt ("de minim us") activities, including standard uses of the landscape is available in Attachment C.

### **GENERAL STIPULATIONS**

These stipulations are designed and intended to maintain existing suitable Greater sage-grouse habitat by permitting development activities in Core Population Areas in a way that will avoid negative impacts to Greater sage-grouse.

General stipulations are recommended to apply to all activities in Core Population Areas, with the exception of exempt ("de minimus") actions defined herein (see Attachment C) or specifically identified activities. The specific industry stipulations are considered in addition to the general stipulations.

#### **Surface Disturbance**

Core Population Area: Surface disturbance will be limited to 5% of suitable Greater sage-grouse habitat per an average of 640 acres over the entire DDCT assessment area. The DDCT process will be used to determine the level of disturbance. Distribution of disturbance may be considered and approved on a case-by-case basis. Unsuitable habitat should be identified in a seasonal and landscape context, on a case-by-case basis, outside the 0.6 mile buffer around occupied leks. This will incentivize proponents to locate projects in unsuitable habitat to avoid creating additional disturbance acres. The primary focus should be on protection of suitable habitats and minimizing habitat fragmentation. See Attachment F for a description of suitable, unsuitable habitat and disturbance.

Non-Core Population Area: There are no limitations to disturbance outside the 0.25 mile no surface occupancy buffer.

### **Surface Occupancy**

Core Population Area: Within 0.6 miles of the perimeter of occupied Greater sage-grouse leks there will be no surface occupancy (NSO). NSO, as used in these recommendations, means no permanent surface facilities including roads shall be placed within the NSO area. Other activities may be authorized with the application of appropriate seasonal stipulations, provided the resources protected by the NSO are not adversely affected. For example, underground utilities may be permissible if installation is completed outside applicable seasonal stipulation periods and significant resource damage does not occur. Seasonal protections are to be determined on principal usage of site by Greater sage-grouse. The primary purpose of the 0.6 restriction around leks is to avoid disturbing leking birds and to maintain habitat integrity (Holloran 2005, Hess and Beck 2012). This necessitates the limitation of traffic or infrastructure that would encourage human activity around occupied leks.

Non-Core Population Area: Within 0.25 miles of the perimeter of occupied Greater sage-grouse leks there will be NSO (Braun et al. 2002). NSO, as used in these recommendations, means no permanent surface facilities including roads shall be placed within the NSO area. Other activities may be authorized with the application of appropriate seasonal stipulations, provided the resources protected by the NSO are not adversely affected. For example, underground utilities may be permissible if installation is completed outside applicable seasonal stipulation periods and significant resource damage does not occur.

### **Seasonal Use**

Core Population Areas (Holloran 2005): Activities will be allowed from July 1 to March 14 outside of the 0.6 mile perimeter of an occupied lek in Core Population Areas where breeding, nesting and early brood-rearing habitat is present.

Non-Core Population Areas (Braun et al. 2002, Dzialak 2011): Activity will be allowed from July 1 to March 14 outside of the 0.25 mile perimeter of an occupied lek. A 2-mile seasonal buffer from March 15 to June 30, applies to occupied leks where breeding, nesting and early brood-rearing habitat is present. Activities in unsuitable habitat may also be approved year-round on a case-by-case basis. Activities may be allowed during seasonal closure periods as determined on a case-by-case basis.

Special Considerations: Where credible data support different timeframes for these seasonal restrictions, dates may be shifted 14 days prior to or subsequent to the above dates, but not both.

Winter Concentration Areas: In areas identified as winter concentration areas, activities will be allowed March 14 to December 1. Activities in unsuitable habitat may also be approved year-

round on a case-by-case basis (except in specific areas where credible data shows calendar deviation). Activities may be allowed during seasonal closure periods as determined on a case-by-case basis. **Timing stipulations only work if activities only occur outside the closure period and then go away (a pipeline or gravel operation).** Permanent structures like well pads, roads, well field infrastructure, etc that remain on the landscape in question, along with associated human disturbance have significant adverse impacts to sage-grouse in both breeding and winter habitats. **Avoidance and minimization are essential to protect winter areas which cannot be replaced (function of topography, soils, normal snow deposition, and sagebrush habitat).**

**Production and Maintenance Activities:** Production and maintenance activities are exempt from seasonal use stipulations. **Assume this category includes periodic fracking which mimics drilling a well but with a shorter period of high human use and disturbance. Fracking should be limited to the timing stipulations tied to the sage-grouse habitat where the well is located as best as can be done unless it is an emergency situation.**

## **Geophysical Exploration**

Geophysical exploration which includes minimal disturbance (3 inch diameter drill holes or just "vibrating") may be permissible in accordance with seasonal stipulations. Staging areas should be located outside of Core Population Areas, covered through a DDCT process, or placed on existing disturbance.

## **Transportation**

Locate new collector or arterial roads that will have relatively high levels of activity (accessing multiple wells, housing development) greater than 1.9 miles from the perimeter of occupied Greater sage-grouse leks (Lyons and Anderson 2003). Locate new local roads used to provide facility site access and maintenance greater than 0.6 miles from the perimeter of occupied Greater sage-grouse leks. Construct roads to minimum design standards needed for production activities.

**Collector or Arterial Roads** are single-lane or double-lane roads, with travel ways 12 to 24 feet in width. They collect traffic from local roads and connect to arterial roads or public highways. They are operated for intermittent or constant service.

**Local Roads** are single-lane roads with travel ways 12 to 14 feet in width. They connect terminal facilities, such as well sites, to collector, local, arterial, or other higher-class roads. They are operated for low-volume traffic.

**Add update – status of new research. Overhead Power Lines** (Avian Power Line Interaction Committee (APLIC) 2015)

It will be necessary to construct significant new transmission infrastructure to transport

electricity generated in Wyoming to out-of-state load centers. Currently, it is unknown what type of lines impact Greater sage-grouse populations, how, and to what extent (Messmer, et al. 2014). There will be new distribution and transmission lines that will need to be built to service existing approved projects.

For purposes of consistency with this Executive Order there is established a transmission line corridor through Core Population Areas in south central and southwestern Wyoming as illustrated on Attachment I. This 2-mile wide corridor represents the State of Wyoming's preferred alternative for routing electric transmission lines across the southern portion of the state while reducing impacts to Core Population Areas and other natural resources.

New transmission lines constructed within corridors identified in this Executive Order (see Attachment I) or within ½-mile either side of existing or permitted (prior to August 1, 2008) 115 kV or larger transmission lines, creating a corridor no wider than 1-mile shall be considered consistent with this Executive Order if construction occurs within the corridor between July 1 and March 14 (or between July 1 and December 1 in Executive Order identified and mapped winter concentration areas). New transmission lines constructed within ½-mile either side of 115 kV or larger transmission lines in existence or permitted prior to the date of this Executive Order and within Core Population Areas added as a result of this Executive Order, creating a corridor no wider than 1-mile, shall be considered to be consistent with this Executive Order if construction occurs within the corridor between July 1 and March 14 (or between July 1 and December 1 in Executive Order identified and mapped winter concentration areas). [Monitoring will be done to determine if the new lines cause a decline in populations.](#)

New transmission lines outside the above described corridors but within Core Population Areas should be authorized or conducted only when it can be demonstrated that the activity will avoid negative impacts to Greater sage-grouse. If it is absolutely necessary to site new distribution and transmission lines through a Core Population Area outside of an existing corridor, lines should be sited to minimize negative impact on Greater sage-grouse or their habitats, and preferentially consider siting along or adjacent to existing long-term linear disturbance features whenever possible (i.e., along existing occupied above ground utilities or roads).

Proponents are encouraged to apply appropriate Best Management Practices (BMPs) specific to electric utility facilities (see APLIC 2015); otherwise, locate overhead lines at least 0.6 miles from the perimeter of occupied Greater sage-grouse leks.

Lines permitted but not located in an Executive Order transmission corridor will be counted towards the 5% disturbance calculation (line disturbance is equal to ROW width X length and includes all access roads, staging areas, and other permanent surface disturbance associated with construction outside of the **ROW**).

### **Noise**

New project noise levels, either individual or cumulative, should not exceed 10 decibels (as measured by  $L_{50}$ ) above baseline noise at the perimeter of a lek from 6:00 pm to 8:00 am during the breeding season (March 1 to May 15). Specific noise protocols for measurement and stipulations for implementation will be developed as additional research and information emerges.

### **Vegetation Removal**

Vegetation removal should be limited to the minimum disturbance required by the project. All topsoil stripping and vegetation removal in suitable habitat is limited to between July 1 and March 14 in areas that are within 4-miles of an occupied lek. Production and maintenance activities (surface mining) outside seasonal stipulations are considered permissible once the

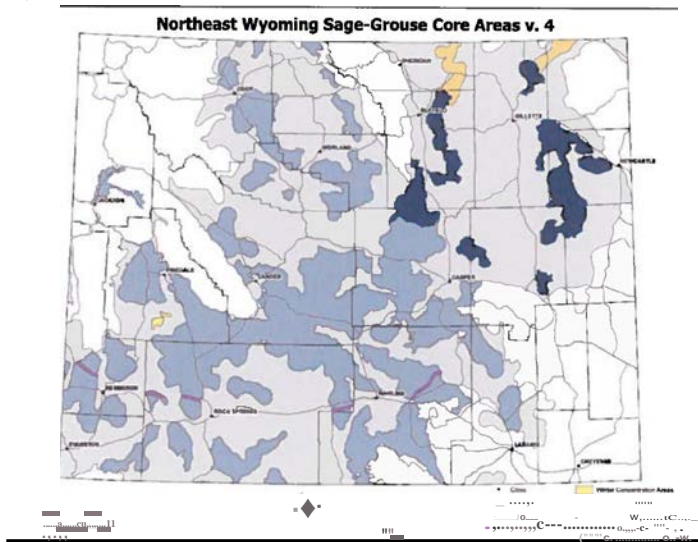
vegetation is removed outside the seasonal stipulations. Initial disturbance in unsuitable habitat

between March 15 and June 30 may be approved on a case-by-case basis. It is important that the "viability" of the topsoil is maintained. A set of BMPs for protecting top soil are outlined in Attachment G.

### Sagebrush Treatment

Sagebrush eradication is considered disturbance and will contribute to the 5% disturbance factor. Northeast Wyoming, as depicted in Figure 5, is of particular concern because sagebrush habitats rarely exceed 15% canopy cover and large acreages have already been converted from sagebrush to grassland or cropland. Absent solid demonstration that the proposed treatment will not reduce canopy cover to less than 15% within the treated area, habitat treatments in Northeast Wyoming (Figure 5) should not be conducted. In stands with less than 15% cover, treatment should be designed to maintain or improve sagebrush habitat (meaning sagebrush canopy cover, with appropriate forb and grass understory). Treatments in core areas should be avoided in most situations. Sagebrush treatments that maintain sagebrush canopy cover at or above 15% total canopy cover within the treated acres will not be considered disturbance. The WGFD has developed a Vegetation Treatment Protocol (July 8, 2011 or updated version) for treating sagebrush to be consistent with this Executive Order. Treatments in Core Population Areas shall follow the Protocol or the treatment acreage may be considered disturbance.

Figure 5



## Reclamation

Reclamation should re-establish native grasses, Forbs and shrubs during interim and final reclamation to achieve cover, species composition, and life form diversity commensurate with the surrounding plant community or desired ecological condition to benefit Greater sage-grouse and replace or enhance Greater sage-grouse habitat to the degree that environmental conditions allow. Seed mixes should include two native forbs and two native grasses with at least one bunchgrass species. See Attachment E. Where sagebrush establishment is prescribed, establishment is defined as meeting the standard prescribed in the individual reclamation plan. Landowners should be consulted on desired plant mix on private lands. The operator is required to control noxious and invasive weed species, including cheatgrass. Rollover credit, if needed, will be outlined in the individual project reclamation plan. Criteria for sagebrush restoration should be defined as being achieved when sagebrush canopy reaches at least 10% in Wyoming Big Sagebrush and Mountain Big Sagebrush over 550% of the area that was once breeding, nesting and early brood rearing habitat (adapted from Connelly et al. 2000). The 5% criteria is valid for low sage, black sage or a mixture of species that includes small amounts of Wyoming Big Sagebrush.

Credit may be given for completion of habitat enhancements on bond release or other minimally functional habitat when detailed in a plan. These habitat enhancements may be used as credit for reclamation that is slow to establish in order to maintain the disturbance cap or to improve nearby Greater sage-grouse habitat. The habitat must be actually restored on the ground, not just included in a plan. This restoration target should include a sagebrush component (10% canopy cover) and not just grasses and forbs. It is unclear in this section if a plan alone is enough to offset poor response to reclamation or wildfires but restoration goals must be actually achieved if there is to be any benefit to sage-grouse.

Conditions for determining when disturbed lands are now considered suitable can be found in Attachment F.

## Monitoring/Adaptive Response

Proponents of new projects are expected to coordinate with the permitting agency and local WGFD biologist to determine which leks need to be monitored and what data should be reported by the proponent. Permits will not be exempted from monitoring. If declines in affected leks (using a three-year running average during any five year period relative to trends on reference leks) are determined to occur, the operator will propose adaptive management responses to increase the number of birds unless the operator can demonstrate the decline was not caused by the project. If the operator cannot demonstrate a restoration of bird numbers to baseline levels (established by pre disturbance surveys, reference surveys and taking into account regional and statewide trends) within three years, operations will cease until such numbers are achieved or an acceptable mitigation plan is developed and implemented..

~~Proponents of new projects are expected to coordinate with the permitting agency and local~~

~~WGFD biologist to determine which leks need to be monitored and what data should be reported by the proponent. Certain permits may be exempted from monitoring activities pending permitting agency coordination. If declines in affected leks (using a three-year running average during any five-year period relative to trends on reference leks) are determined to be caused by the project, the operator will propose adaptive management responses to increase the number of birds. If the operator cannot demonstrate a restoration of bird numbers to baseline levels (established by pre-disturbance surveys, reference surveys and taking into account regional and statewide trends) within three years, operations will cease until such numbers are achieved.~~

### **PREEXISTING OIL AND GAS UNITS**

In administering oil and gas plans of development in Core Population Areas, logical and systematic planning will occur in accordance with the terms of oil and gas unit agreements established prior to August 1, 2008 and the goals of this Executive Order. In administering oil and gas plans of development in Core Population Areas added as a result of this Executive Order, logical and systematic planning will occur in accordance with the terms of oil and gas unit agreements in existence prior to the date of this Executive Order and the goals of this Executive Order. This will be accomplished by concentrating activity within existing unit boundaries even if disturbance and density exceed Executive Order thresholds within the DDCT assessment area.

Each situation should be addressed with flexibility and an understanding of the local landscape, habitats, and other factors.

Federal oil and gas units in effect prior to August 1, 2008 are not subject to new Greater sage-grouse mitigation measures contained in Attachment B of this Executive Order with the exception that unit operators cannot initiate activities resulting in new surface occupancy within 0.6 miles of the perimeter of an occupied Greater sage-grouse lek. Federal oil and gas units in effect prior to the date of this Executive Order within Core Population Areas added as a result of this Executive Order are not subject to new Greater sage-grouse mitigation measures contained in Attachment B of this Executive Order with the exception that unit operators cannot initiate activities resulting in new surface occupancy within 0.6 miles of the perimeter of an occupied Greater sage-grouse lek.

For oil and gas development approved under the annual plan of development and associated surface disturbance proposals by the unit operator, the unit operator is required to complete the DDCT process including the appropriate worksheet when submitting those applications. It is understood that the level of existing and future development in pre-August 1, 2008 Federal oil and gas units may exceed Executive Order thresholds. It is understood that the level of existing and future development in Core Population Areas added as a result of this Executive Order for Federal oil and gas units may exceed Executive Order thresholds.

The DDCT results and worksheet completed for the pre-August 1, 2008 oil and gas unit activity will be used solely to track disturbance data inside the unit boundary to obtain baseline data for use in Executive Order monitoring and to calculate existing and future planned disturbance. For activity in federal oil and gas units in effect prior to the date of this Executive Order within Core Population Areas added as a result of this Executive Order, the DDCT results and worksheet completed will be used solely to track disturbance data inside the unit boundary to obtain baseline data for use in Executive Order monitoring and to calculate existing and future planned disturbance. Proponents and agencies are still expected to minimize surface disturbance whenever possible and follow all other existing, applicable lease stipulations. As projects are completed, as-built footprints will be collected and the disturbance layer updated with the as-built information.

For project proposals located outside unit boundaries, wherein a DDCT assessment area for the project proposal encompasses parts of pre-August 1, 2008 oil and gas units, disturbance will be based upon the existing disturbance, annual plans of development, or other relevant information regarding development provided by the unit operator, the **BLM** Reservoir Management Group or other credible sources of information such as the Wyoming Oil and Gas Conservation Commission. For project proposals located outside unit boundaries established prior to the date of this Executive Order, wherein a DDCT assessment area for the project proposal encompasses parts of oil and gas units in Core Population Areas added as a result of this Executive Order, disturbance will be based upon the existing disturbance, annual plans of development, or other relevant information regarding development provided by the unit operator, the BLM Reservoir Management Group or other credible sources of information such as the Wyoming Oil and Gas

Conservation Commission. In the absence of an annual plan of development or other relevant information, the unit affected will be considered fully developed for the purpose of calculating existing disturbance per the DDCT process.

For new development inside the boundary of a Federal oil and gas unit in effect prior to August 1, 2008 that is not directly related to oil and gas development (e.g., vegetation treatment or gravel pits), the project proponent will be required to comply with all aspects of this Executive Order. For new development inside the boundary of a Federal oil and gas unit in effect prior to the date of this Executive Order within Core Population Areas added as a result of this Executive Order that is not directly related to oil and gas development (e.g., vegetation treatment or gravel pits), the project proponent will be required to comply with all aspects of this Executive Order.

**SPECIFIC STIPULATIONS**  
**(to be applied in addition to general stipulations)**

**Oil and Gas**

Oil and gas well pads and associated infrastructure densities are not to exceed an average of one pad per square mile (1/640) and suitable habitat disturbed not to exceed 5% of suitable habitat within the DDCT assessment area. As an example, the number of well pads within a two mile radius of the perimeter of an occupied Greater sage-grouse lek should not exceed 11, distributed preferably in a clumped pattern in one general direction from the occupied lek.

**Mining**

For development drilling or ore body delineation drilled on tight centers, (approximately 100' X 100') the disturbance area will be delineated by the external limits of the development area. Assuming a widely-spaced disturbance pattern, the actual footprint will be considered the disturbance area.

Monitoring results will be reported annually in the mine permit annual report and to WGFD. Pre-disturbance surveys will be conducted as required by the appropriate regulatory agency.

The number of active mining development areas (e.g., operating equipment and significant human activity) is not to exceed an average of one site per square mile (1/640) within the DDCT.

Surface disturbance and surface occupancy stipulations will be waived within the Core Population Area when implementing underground mining practices that are necessary to protect the human health, welfare, and safety of miners, mine employees, contractors and the general public. The mining practices include but are not limited to bore holes or shafts necessary to: 1) provide adequate oxygen to an underground mine; 2) supply inert gases or other substances to prevent, treat, or suppress combustion or mine fires; 3) inject mine roof stabilizing substances; and 4) remove methane from mining areas. Any surface disturbance or surface occupancy

necessary to access the sites to implement these mining practices will also be exempt from any stipulation.

Coal mining operations will be allowed to continue under the regulatory and permit-specific terms and conditions authorized under the Wyoming Environmental Quality Act (WEQA) and the Surface Mining Control and Reclamation Act of 1977 (SMCRA) as administered by the Wyoming Department of Environmental Quality (WDEQ).

- i. There is the expectation that coal activities as permitted under the WEQA and SMCRA will be implemented to protect Greater sage-grouse and their habitat in Core Population Areas to a high level.
- ii. In Core Population Areas, to avoid significant "negative" impacts to Greater sage-grouse, unsuitability criteria for state high sensitive species (i.e., Greater sage-grouse), will be applied to each coal lease application during the federal coal leasing process. This process includes consultation with the State to identify any lands within the application area that are essential for maintaining high priority wildlife (i.e., Greater sage-grouse). Where appropriate, BLM will find such lands to be unsuitable for further federal coal leasing consideration. Incorporation of new leases into existing mining operations is considered allowable by the State without further regulatory obligations under the Greater sage-grouse Core Area Protection strategy, beyond the current requirements under the WEQA and SMCRA.
- iii. In Core Population Areas, it is understood that there will be exceptions for minimal impacts due to existing mines as they expand their existing operations through modified mine plans and new leases.
- iv. The USFWS has agreed that SMCRA is an adequate regulatory mechanism to protect Greater sage-grouse (USFWS letter dated November 10, 2010). Permitting under the WEQA is required to be equally or more stringent than SMCRA (Section 503 SMCRA 1977).

### **Connectivity Corridors**

See Attachment A.

The suspension of federal and state leases in connectivity corridors (see Attachment A) is encouraged where there is mutual agreement by the leasing agency and the operator. These suspensions should be allowed until additional information clarifies their need. Where suspensions cannot be accommodated, disturbance should be limited to no more than an average of 5% per 640 acres (DDCT Process) of suitable Greater sage-grouse habitat within connectivity corridors.

For protection of connectivity corridors (see Attachment A), a NSO buffer of 0.6 miles around occupied leks or their documented perimeters is required. In addition, a March 15 to June 30 timing limitation stipulation is required within nesting habitat within 4 miles of occupied leks.

### **Underground Rights of Way**

The State of Wyoming and federal management agencies have worked to develop utility corridors in current Resource Management Plans (RMPs). One of the primary purposes of these utility corridors is to encourage placement of future linear development (i.e., pipelines, water lines, fiber optics, etc.) adjacent to existing infrastructure to reduce habitat fragmentation. It is the intent of this Executive Order to continue to incentivize co-location of new pipelines in RMP designated utility corridors. New pipelines proposed in RMP established utility corridors will be required to complete DDCT calculations prior to construction. To allow for accurate future DDCT calculations for projects adjacent to but outside the utility corridors, applicants will submit to the SGIT as-built construction diagrams within 60 days of construction completion that delineate all areas of temporary and permanent disturbance in Core Population Areas including the construction and permanent rights-of-way, roads, storage yards, laydown areas and extra temporary work spaces. The pipeline proponents are not expected to meet Executive Order thresholds within the utility corridor, but the project construction would be subject to appropriate seasonal timing stipulations. The locations of permanent above-ground facilities (such as block valves, compressors, etc.) will be subject to Executive Order thresholds if located outside the designated corridor. Pipelines outside **RMP** designated utility corridors, but in Core Population Areas, are required to comply with the 5% disturbance per the DDCT analysis.

### **Wind Energy Development**

Wind development is not recommended in Greater sage-grouse Core Population Areas, but will be reevaluated on a continuous basis as new science, information and data emerges.

### **PROCESS DEVIATION OR UNDEFINED ACTIVITIES**

Development proposals incorporating less restrictive stipulations or development that are not covered by these stipulations may be considered depending on site-specific circumstances. The proponent must have data demonstrating that the alternative development proposal will avoid negative impacts to Greater sage-grouse in Core Population Areas. Proposals to deviate from standard stipulations will be considered by a team including WGFD and the appropriate land management and permitting agencies, with input from the USFWS. To deviate from standard stipulations project proponents need to demonstrate that the project development would meet at least one of the following conditions:

- No suitable habitat is present in one contiguous block of land that includes at least a 0.6 mile buffer between the project area and suitable habitat;

- No Greater sage-grouse use occurs in one contiguous block of land that includes at least a 0.6 mile buffer between the project area and adjacent occupied habitat, as documented by total absence of Greater sage-grouse droppings and an absence of Greater sage-grouse activity for the previous ten years; or
- Implementation of a development/mitigation plan that has demonstrated through previous research avoids negative impacts to Greater sage-grouse. The demonstration must be based on monitoring data collected and analyzed with accepted scientific based techniques.

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**EXECUTIVE ORDER 2015-4**  
**ATTACHMENT C**

**Exempt ("de minimis") Activities**

The following are considered "de minimis" activities:

1. Drilling and outfitting of agricultural or residential water wells (including tank installation, pumps, and agricultural water pipelines) more than 0.6 miles from the perimeter of an occupied lek. Construction within 0.6 miles is allowed from July 1 through March 14, after a habitat evaluation has occurred, and provided development does not occur on the lek. New tanks shall have escape ramps.
2. Electric utilities are obligated by regulation to serve customers with safe and reliable electric service. Likewise, utilities must comply with agency Greater sage-grouse protective stipulations. In order to allow electric utilities the operational ability to provide and maintain service to their customers while affording adequate protection for Greater sage-grouse, distribution lines within 0.6 miles from an occupied lek are considered "de minimis" provided that: (1) construction of lines occurs from July 1 through March 14; (2) such lines are not constructed on the lek itself; and (3) a habitat evaluation has occurred. For general and operational maintenance activities of existing distribution lines, the electric utility shall use appropriate/applicable Best Management Practices for electric utilities (Avian Power Line Interaction Committee 2015). Coordination of ongoing activities with Wyoming Game and Fish Department (WGFD) is encouraged.
3. Preventative or required county road maintenance activities within the right-of-way (blading/smoothing, filling pot holes, graveling, culvert replacement, right-of-way maintenance, cattle guard maintenance, etc.) are considered "de minimis". Road construction activities (vertical or horizontal realignment, roadway widening, new construction, bridge replacement, etc.) are not considered "de minimis" and may require completion of a Density/Disturbance Calculation Tool (DDCT) analysis (Pendleton 2015).
4. Authorized or required cultural, paleontological, and biological resource and land surveys.
5. Emergency response and public health and safety issues.
6. Existing animal husbandry practices (including branding, docking, herding, trailing, etc.).
7. Existing farming practices and reclamation seeding (excluding conversion of sagebrush habitats to agricultural lands).
8. Construction of agricultural reservoirs, less than 10 surface acres and more than 0.6 miles from the perimeter of an occupied lek. Construction within 0.6 miles is allowed from July 1 through March 14, after a habitat evaluation has occurred, and provided that development does not occur on the lek.

9. Construction of aquatic habitat improvements, less than ten wetland or water surface acres, more than 0.6 miles from the perimeter of an occupied lek. Construction within 0.6 miles is allowed from July 1 through March 14, after a habitat evaluation has occurred, and provided development does not occur on the lek.

10. Irrigation (excluding the conversion of sagebrush habitats to new irrigated lands).

11. Spring development; if the spring is protected with fencing and enough water remains at the site to provide mesic (wet) vegetation. Fences should be constructed to be highly visible to Greater sage-grouse (i.e., buck-and-rail, steeljack, etc.) and/or marked to minimize collision potential.

12. New fencing more than 0.6 miles from the perimeter of an occupied lek. New fences or new stretches of fences, with high potential for collisions should be marked or be designed to minimize risk. Construction within 0.6 miles is permitted so long as construction does not occur from March 15 to June 30 or on the lek itself; coordination with WGFD is strongly suggested.

13. Maintenance of existing fence.

14. Herbicide applications within existing road, pipeline, and power line rights-of-ways, application within reclamation areas for weed control, application adjacent to structures or other applications for spot treatments. Pesticide treatment for Grasshopper/Mormon cricket control following Reduced Agent-Area Treatments protocol. Other required or authorized pesticide treatments for state or county listed species or vector treatments for other diseases such as West Nile Virus. All treatments must be done in accordance with regulations and labels. Coordination with Weed & Pest Districts is strongly encouraged.

15. Grazing operations that utilize recognized management approaches (allotment management plans, Natural Resource Conservation Service grazing plans, prescribed grazing plans, etc.).

It is Wyoming's primary premise that grazing activities are compatible with Greater sage-grouse conservation and may improve habitat for Greater sage-grouse **if effectively implemented and include a component that addresses sage-grouse habitat requirements.** Grazing management practices maintain or enhance Wyoming rangelands. Properly managed rangelands are capable of sustaining robust Greater sage-grouse populations and a diversity of plant species important to Greater sage-grouse habitat. (USFWS, February 5, 2015, Memo to State Directors and Field Supervisors: Service Position on Livestock Grazing and Working with the Rangeland Owners to Conserve Sage-Grouse)

The State of Wyoming will collaborate with appropriate Federal agencies to: (1) develop appropriate conservation objectives; (2) define a framework for evaluating situations where Greater sage-grouse objectives are not being achieved on Federal land, to determine if a causal relationship exists between improper grazing (by wildlife, wild horses or livestock) and Greater sage-grouse conservation objectives; and (3) identify appropriate site-based action to achieve Greater sage-grouse conservation objectives within the framework.

If grazing adjustments are believed necessary to achieve Greater sage-grouse conservation objectives, coordination among land management agencies and permit/lease holders shall take place. Monitoring data used within the framework will, at a minimum: reflect 5 years of information, include rangeland health assessments, and require conclusion or action to be based on 3 out of 5 consecutive years of data (*i.e.*, Y1-2-3, Y2-3-4, Y3-4-5). These requirements may be waived in case of a catastrophic event such as fire. Further, the State recognizes there is a distinction between conservation objectives and land health standards and that it is possible to achieve land health standards while not achieving Greater sage-grouse conservation objectives and vice-versa. Federal agency participation in the implementation of this Executive Order in no way precludes them from managing federal surface for rangeland health.

| [See grazing discussion in previous section](#)

**EXECUTIVE ORDER 2015-4  
ATTACHMENTD**

**Federal and State Permitting Agency Coordination**

**Background:**

The Density/Disturbance Calculation Tool (DDCT) process and review of project compliance with Executive Order 2015-4 will be coordinated through the DDCT web application ([ddct.wyisc.org](http://ddct.wyisc.org)).

The proponent should provide the most complete and comprehensive description of a project as possible. Splitting a project into smaller components can cause delay in review and could risk denial of a permit necessary for the entire project. It is recommended that proponents thoughtfully consider and include for review potential future development(s) and/or infrastructure associated with or that may be needed to support the current proposed project.

If the proponent has a concern that a project will not comply with this Executive Order, the proponent should contact the Wyoming Game and Fish Department (WGFD) and the appropriate land management and/or permitting agencies as soon as possible. Noncompliance with this Executive Order is not an automatic permit denial and all projects will be reviewed and potential impacts to local Greater sage-grouse populations and habitat will be assessed. Advanced planning with the permitting agencies and WGFD is the recommended way to resolve issues.

If the proponent submits a DDCT that is not in compliance, the agencies involved will need to discuss all options and potential impacts to local Greater sage-grouse populations and habitat. Initiating these discussions in advance of the final DDCT submittal may yield timelier review/decision results.

1. If federal surface/mineral is involved, the proponent works with the appropriate federal land management agency on the DDCT process and disturbance delineations, then:
  - The federal agency submits the DDCT (and worksheet) for technical review to the DDCT Data Steward at the Wyoming Geographic Information Science Center. The Data Steward will work with the federal agency in completing the technical review process (Note: the federal agency may use a contractor to make the corrections). When completed, the federal agency also submits the DDCT worksheet to the Data Steward.
  - Once technical review is completed, the Data Steward submits the DDCT final results and DDCT worksheet to WGFD Habitat Protection Program (HPP) for policy review.
  - WGFD HPP coordinates with state agencies and the federal agency if there are issues with Executive Order exceedances or compliance.
  - WGFD HPP sends a letter regarding Executive Order compliance and recommendations to the federal agency and copies the proponent and permitting agencies that may also be involved in the project.

- If agencies have questions about the recommendations, they should contact WGFD HPP.
2. If federal surface or mineral is not involved, the project proponent (NOTE: could be a consultant) completes the DDCT process, then:
- Submits the DDCT to the Data Steward for technical review. The Data Steward will work with the proponent to complete the technical review process. When completed, the proponent submits the DDCT worksheet to the Data Steward.
  - The Data Steward submits the DDCT final results and DDCT worksheet to WGFD HPP for policy review.
  - WGFD HPP coordinates with state agencies if there are issues with Executive Order exceedances or compliance.
  - WGFD HPP sends a letter regarding Executive Order compliance and recommendations to the proponent and copies permitting agencies.
  - If agencies have questions about the recommendations, they should contact WGFD HPP.

#### **Letters from WGFD:**

Letters from WGFD will determine whether or not the project complies with the process and stipulations outlined in this Executive Order and may provide recommendations on whether the permit should be issued and/or recommendations on how impacts to the Greater sage-grouse may be minimized. State agencies will be the point of contact for conducting a DDCT analysis for locatable minerals. These recommendations may or may not be accepted by the permitting agency and incorporated in the conditions of the permit. If there are changes to the project, the proponent should complete the DDCT review process again.

The permitting agency should document whether or not the recommendations were accepted and incorporated as part of permit. If the permitting agency is unable to implement a recommendation, the agency should document the circumstances which preclude incorporation into the permit. For example, it is not within the agency's regulatory authority or it is not physically or legally possible to make the recommended changes.

**EXECUTIVE ORDER 2015-4  
ATTACHMENT E**

**Vegetation Monitoring for Suitability Criteria of Reclaimed Areas**

**Goal:** Measurements that should be taken when there is uncertainty concerning the status of reclaimed areas contributing to suitable habitat.

If sagebrush canopy cover is 5%, or greater, as measured by the method described in the Bureau of Land Management's Sage-Grouse Habitat Assessment Framework, it is considered suitable habitat. **This is inadequate canopy cover to provide effective nesting habitat but may be adequate in some cases to provide winter habitat on windblown sites. A landscape dominated by only 5% sagebrush canopy cover is poor sage-grouse habitat and indicative of a local population at risk of extirpation (see Northeast Wyoming population trends in areas with limited habitat due to conversion to agronomic grasses and energy development. See previous comments.)**

When sagebrush canopy cover is less than 5%, but within 60 meters of greater than 5% sagebrush canopy cover, measure to determine compliance with the following conditions:

**Measure for 2 (or more) desirable native grasses at least one of which is a bunchgrass in appropriate sites.** The species present in the reclaimed area should be reflected in an appropriate reference site, described in the ecological site description (ESD) for the reclaimed site(s), or be representative of pre-disturbance species data. A reference site will be agreed upon and determined by the land management agency or owner, Wyoming Game and Fish Department and the proponent. It is recognized that reference sites could be numerous for linear features.

- The **frequency** of occurrence of grass is expected to meet or exceed 70% of the frequency of grass as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data. **Grass canopy cover** measurement is expected to meet or exceed 70% of the grass canopy cover as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.

**Likewise, measure for 2 desirable native forbs.**

- The **frequency** of occurrence of forbs is expected to meet or exceed 70% of the frequency of forbs as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.
- Forbs **canopy cover** is expected to meet or exceed 70% of the forb canopy cover as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.

**Methodology**

- Sampling timing for grasses, forbs, and shrubs is typically not later than July 1.

- Canopy cover for grasses/forbs: Line Point Intercept (see Habitat Assessment Framework).
- Frequency for grasses/forbs: Plot (rectangles, squares or circles) frequency computed as number of quadrats with the species of interest rooted within it, divided by the total

number of quadrats that are sampled. This value will be multiplied by 100 to yield frequency as a percentage. It is recommended that a minimum of 5 to 10 transects, 30 to 50 meters wide be conducted with a minimum of 10 to 20 quadrats (e.g. Daubenmire frame or quadrat appropriate to the site) placed equidistantly along each transect.

- Canopy cover for sagebrush: Line Intercept (see Habitat Assessment Framework).
- Sample size: The Habitat Assessment Framework provides sample size recommendations. Final estimates must include a 90% confidence interval computed around the mean values estimated from vegetation sampling.



**EXECUTIVE ORDER 2015-4**  
**ATTACHMENT F**

**Greater Sage-Grouse Habitat Definitions**

Greater sage-grouse require somewhat different seasonal habitats distributed over large areas to complete their life cycle. All of these habitats consist of, are associated with, or are immediately adjacent to, sagebrush. An abbreviated description of a complex system cannot incorporate all aspects of, or exceptions to, what habitats a local Greater sage-grouse population may or may not utilize. Refer to the Bureau of Land Management's Sage-Grouse Habitat Assessment Framework for further information.

**"Suitable"** Greater sage-grouse habitat (nesting, breeding, brood-rearing, or winter) is within the mapped occupied range of Greater sage-grouse, and:

1. has 5% or greater sagebrush canopy cover (for nesting, brood-rearing and/or winter) as measured by the point intercept method. "Sagebrush" includes all species and sub-species of the genus *Artemisia* except the mat-forming sub-shrub species: *frigida* (fringed) and *pedatifida* (birdfoot); ~~The 5% sagebrush canopy cover criteria listed as the threshold for a site providing adequate sage-grouse habitat is inadequate to provide functional nesting habitat except where small denser patches of tall sagebrush occur scattered across analysis area. The 5% canopy cover criteria actually is indicative of sites where populations persistence is questionable if this limited canopy cover value is widespread over a landscape or is residual sagebrush canopy cover following eradication efforts or wildfire where only the dense patches of vegetation burned). Nest success and adult and chick survival are usually not adequate to sustain a population living in this type of habitat (Connelly 2000).~~ However, sites with only 5-10% tall sagebrush canopy cover may provide winter habitat in some situations where windblown ridges provide functional and usable winter habitat (often black sage or a mixture of low sagebrush species, black sage and patches of Wyoming big sagebrush).
- 1.
2. Update to be more realistic. This is a highly conservative distance. Have observed broods in riparian habitat > 1 km from sagebrush ~~which may be late brood-rearing habitat. Generally-is~~ riparian, wet meadow (native or introduced) or areas of alfalfa or other suitable forbs (brood rearing habitat) within ~~275~~60 meters of sagebrush habitat with 5% or greater sagebrush canopy cover (for roosting/loafing) (Slater 2003); or
3. is reclaimed habitat containing at least 2 native grasses (at least one bunchgrass in appropriate sites) and 2 native forbs (see Reclamation, Attachment B) and no point within the grass/forb habitat is more than 60 meters from adjacent 5% or greater sagebrush cover.

**"Transitional"** Greater sage-grouse habitat is land that has been treated or burned prior to 2011 resulting in less than 5% sagebrush cover but is actively managed (~~meaning what?~~) to meet a minimum of 5% sagebrush canopy cover with associated grasses and forbs by 2021 (as

determined by analysis of local condition and trend) and may or may not be considered "disturbed". Land that does not meet the above vegetation criteria by 2021 should be considered disturbed.

Habitat treatments must meet the current Wyoming Game and Fish Department Protocols for Treating Sagebrush to be consistent with Executive Order 2015-4, Greater Sage-grouse Core Area Protection, or the habitat treated will be considered disturbed. Following wildfire, lands shall be considered "disturbed" pending an implemented management plan with trend data showing the area returning to functional Greater sage-grouse habitat.

- Areas burned by wildfire (after 2011) shall be treated as disturbed pending an implementation management plan with trend data showing the area returning to functional Greater sage-grouse habitat. This is specific only to wildfire. This direction is not intended for other incentive/mitigation/habitat treatment situations.
- . In this case large fires (greater than 500 acres) should be considered returning to functional habitat once sagebrush with adequate canopy cover and height has been restored by management actions or naturally. Establishment of grasses and forbs, while very desirable, does not equate to restoration of sage-grouse habitat unless the sagebrush component is present in adequate amounts to provide functional nesting habitat (about 10%-15% canopy cover in areas with Wyoming Big Sagebrush outside NE Wyoming or possibly the Bighorn Basin). The 5% sagebrush canopy cover criteria listed in another appendix as the threshold for a site providing adequate sage-grouse habitat is inadequate to provide functional nesting habitat ~~except where small denser patches occur scattered across analysis area (the 5% can~~. The 5% canopy cover criteria actually is indicative of sites where populations persistence is questionable if this limited canopy cover widespread over a landscape. Sites with 5% tall sagebrush cover ~~also~~ may provide winter habitat in some situations where windblown ridges provide functional and usable winter habitat. The only caveat to this is if the fire burned in a patchy mosaic with burned patches are less than 100 acres in juxtaposition with unburned mature sagebrush patches, then the grass/forb criteria might be adequate since tall sagebrush cover is adjacent to the burned areas which would provide foraging habitat. The logic here is sage-grouse broods ~~generally~~ only venture about ~~200-60~~ yards into burned areas where sagebrush has been removed (edge effect) and the rest of the burn gets little use until there is sagebrush recovery (Slater 2003).. Recovery to 10-15% canopy cover may take as ~~which can be as~~ little as 15-30 years in mesic Mountain big sage-brush or over 200 years in xeric (dry) Wyoming Sagebrush sites (Baker 2007, Baker 2008, Beck et.al. 2008) ~~.(citations)-~~



- The goal is to incentivize restoration of wildfire burns to return as much of the affected burned area back to suitable habitat as quickly as possible. This is a landscape effort and is not considered mitigation banking. This process should be used when wildfire is impacting the disturbance percentages.
- A Technical Team comprised of the U.S. Forest Service, Bureau of Land Management, Natural Resource Conservation Service, the Wyoming Game and Fish Department, Office of State Lands and Investments Forestry Division, Wyoming Department of Agriculture (Weed and Pest), local working groups, conservation districts and private landowners would develop the plan and trending data. It would be the responsibility of the project proponent to conduct the monitoring. An upward trend would be determined through the collection of five years of data and review by the Technical Team.

**"Unsuitable"** Greater sage-grouse habitat' is land within the historic range of Greater sage-grouse that did not, does not, and will not provide Greater sage-grouse habitat due to natural ecological conditions such as badlands, canyons or forests.

**"Disturbed"** suitable Greater sage-grouse habitat <sup>1</sup> is land that has been converted from formerly suitable habitat to grasslands, croplands, mined or otherwise physically disturbed areas. To evaluate the 5% disturbance cap per average 640 acres using the Density/Disturbance Calculation Tool (DDCT), suitable habitat is considered disturbed when it is removed and unavailable for immediate Greater sage-grouse use. These areas may provide habitat at some time in the future through succession or restoration. Disturbed suitable habitats could also include those permanent disturbances such as major reservoirs and cities that once were considered suitable.

The following items are guidelines for determining disturbed habitat for the DDCT process:

- a. Long-term removal occurs when habitat is physically removed through activities that replace suitable habitat with long-term occupancy of unsuitable habitat such as a road, well pad or active mine.
- b. Short-term removal occurs when vegetation is removed in small areas, but restored to suitable habitat within a few years of disturbance, such as a successfully reclaimed pipeline, or successfully reclaimed drill hole or pit.
- c. There may be additional suitable habitat considered disturbed between two or more long-term (greater than 1 year) anthropogenic disturbance activities if the activities are located such that Greater sage-grouse use of the suitable habitat between these activities is significantly reduced due to the close proximity (less than 1.2 miles apart, 0.6 mile from each activity) and resulting cumulative effects of these large scale activities. Exceptions

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<sup>1</sup> The BLM Habitat Assessment Framework definition of "unsuitable" includes both "disturbed" and "unsuitable" habitats as defined above.

may be provided.

- d. Land in Northeast Wyoming (see Attachment B, Figure 8) that has had sagebrush removed post-1994 (based on Orthophoto interpretation), and not recovered to suitable habitat will be considered disturbed when using the DDCT.

**EXECUTIVE ORDER 2015-4  
ATTACHMENT G**

**Best Management Practices for Soils on Resource Extraction Sites**

1. Get to know the nature of the soil(s) on the site where you are working. Good basic information can be obtained from the Natural Resource Conservation Service Soil Survey and more detailed information can easily be gathered by digging a few soil pits and testing some soil properties on the site (pH, Electrical Conductivity, Texture, Calcium Carbonate content and gravel content).
2. Topsoil should be removed from the site before resource extraction activities and stored in suitable stockpiles to protect this valuable resource from loss or contamination during resource extraction. Topsoil is important to timely site reclamation. Topsoil should be salvaged while at a low moisture content. Avoid mixing A horizons with B horizons if the B horizons are salty and or clayey.
3. Topsoil stockpiles should be located in an area where they will not be disturbed by resource extraction activities or contaminated by foreign or spilled materials. Movement of stockpiles should be kept to a minimum. Stockpiles should be designed to minimize exposure to erosional forces and bury as little undisturbed soil as possible.
4. Upon completion of resource extraction activities or interim reclamation, topsoil should be respread on the disturbed site to approximate original conditions. Vegetation should be reestablished on the replaced soil as quickly as possible to stabilize the site and prevent erosion. Regular monitoring should be conducted to be sure that revegetation and stabilization of the site proceed according to expectations and no site degradation occurs.
5. The use of commercial fertilizers is generally not recommended for native rangeland reestablishment due to the possibility of increased annual weeds. Soil testing should be completed prior to reestablishment of native plants on highly disturbed soils and, if necessary, the appropriate amendments should be used.
6. It is important not to over-estimate the amount of vegetation removal (habitat loss) in a given year.
7. In order to minimize impacts to soil resources, an alternative to large-scale advanced removal of soil is to skim the surface of the soil with a motor patrol between July 1 and March 14. This may be useful or applicable where operational plans are uncertain or where there is a desire to "live-spread" soils at some point in the period of March 14 - July 1.
  - Leave as much root intact as possible.
  - Leave vegetative biomass in wind-rows to reduce wind and water erosion.

8. If unexpected changes in operational plans require vegetation removal between March 14 and July 1, a nest survey shall be completed by a competent biologist within 1 week prior to any vegetation removal in suitable habitat. Results shall be submitted to the appropriate regulatory agency with a copy to Wyoming Game and Fish Department (WGFD). If a nest is discovered, operations will not be allowed to proceed until after July 1 or otherwise approved by WGFD.

Source: Peter Stahl and Jay Norton, Wyoming Reclamation and Restoration Center, University of Wyoming

**EXECUTIVE ORDER 2015-4**  
**ATTACHMENT H**

**Compensatory Mitigation**

Compensatory mitigation is an essential component of a long-term conservation strategy, where avoidance and minimization are either inadequate or impossible to assure perpetuation of a species of concern. By its nature, compensatory mitigation may be applicable "on-site", but may often be achieved more effectively "off-site" in order to maintain a landscape-scale result that is beneficial to a species, and not a particular population or group of animals. **This concept is based on some false logic. This concept does little to nothing to mitigate the impacts on a local population if the mitigation, no matter how valuable, is completed -far away from the impacted local population. Conservation easements do nothing to offset population losses or habitat losses since they result in no net gain to either parameter but only preclude future residential or infrastructure someplace else. For example, a mitigation bank must be functioning some place in the Green River Basin for it to have any value to mitigate impacts to one of the biggest sage-grouse populations in Wyoming in the Green River Basin. A mitigation plan for a project in the Upper Green river Basin that is based in Natrona County is meaningless to the affected local population. For small local populations in core areas this approach could lead ultimately to extirpation of that local population and range contraction for the species.** Compensatory mitigation must be secured prior to any negative impact to a species or its habitat occurs.

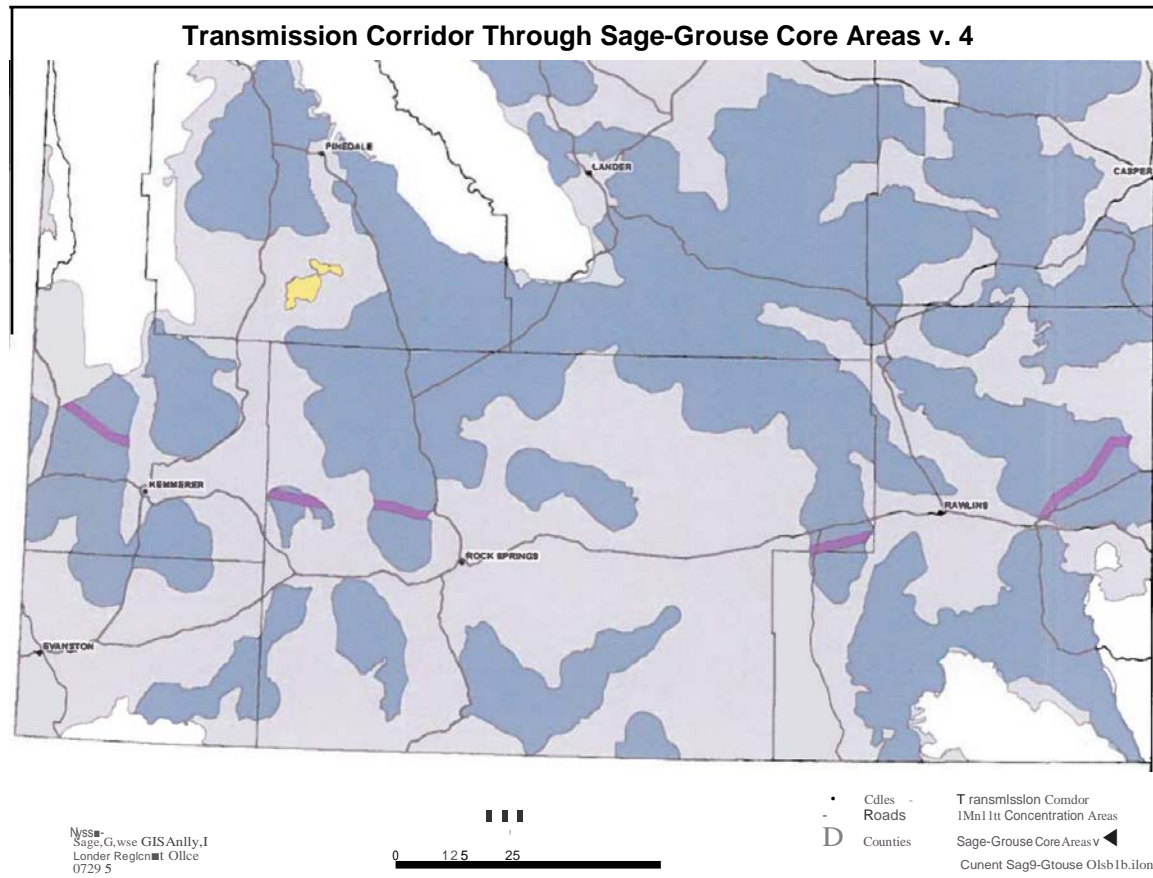
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Compensatory mitigation that occurs "off-site" should meet the complete life-cycle needs of the species, be secured for an adequate time to assure the replacement of resources that are lost as a result of any negative action impacting the species, and be critically evaluated to provide adequate biological assurances that the initial impact, and any associated mitigation will maintain the species and its habitat until the impact has been removed and the species is recovered at the site of impact. Compensatory mitigation must provide an adequate ratio of assurance that the conservation of the species will not be compromised due to the failure of compensation measures to adequately protect the species, including management changes, natural disasters, and other impacts.

The State of Wyoming recognizes compensatory mitigation as a strategy that should be used when avoidance and minimization are inadequate to protect Core Population Area Greater sage-grouse. Any compensatory mitigation proposal must include approval from the State of Wyoming to assure the species considered is adequately protected, and that the benefits proposed for a species under the jurisdiction of the State of Wyoming are real, adequate, and fully realized prior to the time of acceptance.

Executive Order 2015-4  
Attachment **H**

EXECUTIVE ORDER 2015-4  
ATTACHMENT I





WGFD HPP <wgfd.hpp@wyo.gov>

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## Revised Comments: Wyoming Sage-Grouse Executive Order - Public Input Requested - Western Area Power Administration

---

Little, Brian <BLittle@wapa.gov>

Wed, May 1, 2019 at 11:45 AM

To: "wgfd.hpp@wyo.gov" <wgfd.hpp@wyo.gov>

Cc: "Langer, Timothy" <Langer@wapa.gov>, "Blazek, Steven" <SBlazek@wapa.gov>, "Morey, Scott" <Morey@wapa.gov>, "Severson, Andrea" <Severson@wapa.gov>, "Albert, Melissa (CONTR)" <MAAlbert@wapa.gov>

Dear Governor Gordon and Sage-Grouse Implementation Team Chairman Budd:

WAPA has revised our comments initially sent in at 9:43 on May 1, 2019, regarding the Wyoming Sage-Grouse Executive Order. Please use the version below as our official comment.

Thanks.

Western Area Power Administration (WAPA) is a federal agency within the Department of Energy that operates and maintains energy transmission infrastructure across the State of Wyoming, including substations, communication sites, transmission lines, and distribution lines. Thank you for seeking comments regarding specific areas of the existing Sage-Grouse Executive Order 2015-4 (SGEO) that might benefit from clarification. Per your instructions, WAPA is submitting the following comments with explanation.

### Utility Rights-of-Way with Valid Existing Rights

Stipulation 2 of the SGEO (page 4 of 7) begins with the statement: "Valid existing rights shall be recognized and respected. Activities existing or permitted in Core Population Areas prior to August 1, 2008, will not be required to be managed under Core Population stipulations". WAPA's existing rights-of-way (ROWs) in Wyoming were established between 1924 and 1994, excepting any new construction since 2008. Even though "utility ROW" is currently listed as an example of a federally permitted activity which "shall be allowed to continue within the existing boundary even if the use exceeds recommended stipulations," current implementation of the SGEO requires WAPA to complete the Greater Sage-Grouse Core Area Protection Worksheet and coordinate with the State for operation and maintenance activities on these existing ROWs. Through this coordination process with the State, WAPA has been burdened with sage-grouse stipulations that affect our ability to safely and reliably maintain the bulk electric system. Utility ROWs are not considered suitable sage-grouse habitat and WAPA's ROWs have been on the landscape for an average of 59 years, with consistent and frequent operation and maintenance activities since their original construction. WAPA's comment is that operation and maintenance of utility ROWs with valid existing rights should neither require coordination with the State, nor use of the Greater Sage-Grouse Core Area Protection Worksheet, for activities both within and outside of sage-grouse Core Population Areas.

Similarly, operation and maintenance activities of utility ROWs with valid existing rights should not be subject to either the Density/ Disturbance Calculation Tool (DDCT), or measures to avoid, minimize, or compensate for potential effects to sage-grouse. The DDCT process is used by the State to evaluate proposals relative to SGEO thresholds. As stated in the SGEO and repeated in the previous paragraph, existing utility ROWs are exempt from these thresholds and therefore this comparison is not applicable.

## Operation and Maintenance of Transmission Lines and Associated Infrastructure

Attachment B, Overhead Power Lines (pages 7-8 of 16), describes requirements for construction of new distribution and transmission lines. Attachment C, Activity 2 (page 1 of 3), begins with the statement: "Electric utilities are obligated by regulation to serve customers with safe and reliable electric service." The remainder of the paragraph applies to construction and maintenance of distribution lines. Nowhere in the SGEO is the operation and maintenance of transmission lines and associated infrastructure adequately addressed, thus leaving implementation of the SGEO relative to operation and maintenance activities up to interpretation.

WAPA recommends the activity list in Attachment C, Exempt ("de minimis") Activities, be modified to include the operation and maintenance of existing transmission lines and associated infrastructure (substations and communication sites). Consistent with comments contained in the rest of this letter, WAPA believes such activities with valid existing rights should be allowed to proceed without coordination with the State and without consideration of sage-grouse avoidance, minimization, and compensatory mitigation measures. This would benefit the State of Wyoming and utilities operating within the State by providing consistent direction and implementation.

Thank you for your time and consideration.

**Brian Little | Environmental Manager**

Western Area Power Administration | Rocky Mountain Region

(O) 970.461.7287 | [blittle@wapa.gov](mailto:blittle@wapa.gov)

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**From:** Little, Brian  
**Sent:** Wednesday, May 1, 2019 9:43 AM  
**To:** 'wgfd.hpp@wyo.gov' <[wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)>  
**Cc:** Langer, Timothy <[Langer@wapa.gov](mailto:Langer@wapa.gov)>; Blazek, Steven <[SBlazek@wapa.gov](mailto:SBlazek@wapa.gov)>; Morey, Scott <[Morey@wapa.gov](mailto:Morey@wapa.gov)>; Severson, Andrea <[Severson@wapa.gov](mailto:Severson@wapa.gov)>; Albert, Melissa (CONTR) <[MAIbert@wapa.gov](mailto:MAIbert@wapa.gov)>  
**Subject:** Wyoming Sage-Grouse Executive Order - Public Input Requested - Western Area Power Administration

Dear Governor Gordon and Sage-Grouse Implementation Team Chairman Budd:

Western Area Power Administration (WAPA) is a federal agency within the Department of Energy that operates and maintains energy transmission infrastructure across the State of Wyoming, including substations, communication sites, transmission lines, and distribution lines. Thank you for seeking comments regarding specific areas of the existing Sage-Grouse Executive Order 2015-4 (SGEO) that might benefit from clarification. Per your instructions, WAPA is submitting the following comments with explanation.

### **Utility Rights-of-Way with Valid Existing Rights**

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Similarly, operation and maintenance activities of utility ROWs with valid existing rights should not be subject to either the Density/ Disturbance Calculation Tool (DDCT), or measures to avoid, minimize, or compensate for potential effects to sage-grouse. The DDCT process is used by the State to evaluate proposals relative to SGEO thresholds. As stated in the SGEO and repeated in the previous paragraph, existing utility ROWs are exempt from these thresholds and therefore this comparison is not applicable.

### **Operation and Maintenance of Transmission Lines and Associated Infrastructure**

Attachment B, Overhead Power Lines (pages 7-8 of 16), describes requirements for construction of new distribution and transmission lines. Attachment C, Activity 2 (page 1 of 3), begins with the statement: “Electric utilities are obligated by regulation to serve customers with safe and reliable electric service.” The remainder of the paragraph applies to construction and maintenance of distribution lines. Nowhere in the SGEO is the operation and maintenance of transmission lines and associated infrastructure adequately addressed, thus leaving implementation of the SGEO relative to operation and maintenance activities up to interpretation.

WAPA recommends the activity list in Attachment C, Exempt (“de minimis”) Activities, be modified to include the operation and maintenance of existing transmission lines and associated infrastructure (substations and communication sites). Consistent with comments contained in the rest of this letter, WAPA believes such activities with valid existing rights should be allowed to proceed without coordination with the State and without consideration of sage-grouse avoidance, minimization, and compensatory mitigation measures. This would benefit the State of Wyoming and utilities operating within the State by providing consistent direction and implementation.

Thank you for your time and consideration.

**Brian Little | Environmental Manager**

Western Area Power Administration | Rocky Mountain Region

(O) 970.461.7287 | blittle“at”[wapa.gov](mailto:blittle@wapa.gov)

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WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## WWP et al. comments on Wyoming sage grouse plan

---

**Erik Molvar** <emolvar@westernwatersheds.org>

Thu, Apr 25, 2019 at 1:01 PM

To: wgfd.hpp@wyo.gov

Cc: Steve Holmer <sholmer@abcbirds.org>, Jackie Canterbury <jackie.canterbury@gmail.com>, Greta Anderson <greta@westernwatersheds.org>, Taylor Jones <tjones@wildearthguardians.org>, Randi Spivak <rspivak@biologicaldiversity.org>, Michael Saul <msaul@biologicaldiversity.org>, William Davidson <rdavidson@councilbighornrange.org>, Nancy Hilding <nihilshat@rapidnet.com>, Liliias Jarding <liliiasjarding@gmail.com>, Shaleas Harrison <shaleas@wildwyo.org>, Linda Baker <linda@uppergreen.org>

Dear Governor Gordon and Director Nesvik,

Attached please find the comments of Western Watersheds Project, American Bird Conservancy, Bighorn Audubon, WildEarth Guardians, Center for Biological Diversity, Council for the Bighorn Range, Prairie Hills Audubon Society, Black Hills Clean Water Alliance, Wyoming Wilderness Association, and Upper Green River Alliance on the Wyoming state sage-grouse plan.

We have also attached some particularly relevant maps and scientific studies. If you are unable to obtain any of the studies references in these comments, please let me know and I can send them to you directly.

Thank you for your consideration of these comments,

Erik Molvar  
Executive Director  
Western Watersheds Project  
319 South 6th Street  
Laramie WY 82070  
(307) 399-7910

...  
P.O. Box 1770  
Hailey, ID 83333

---

### 7 attachments



**WWP et al comments on WY plan.pdf**  
446K



**Att 1 Apa et al 2008.pdf**  
680K



**Att 2 Core Area Boundaries versus Population Density.pdf**  
219K



**Att 3 core\_finalposter1\_reductions.pdf**  
7047K



**Att 4 Taylor et al 2012 Powder\_River\_Sage-Grouse\_PVA\_Report.pdf**  
1610K



**Att 5 WY SG Pop Trends 1995-2013 ppt.pdf**

4/25/2019

State of Wyoming Mail - WWP et al. comments on Wyoming sage grouse plan

102K



**Att 6 Garton et al 2015.pdf**

1409K

**Western Watersheds Project**

319 South 6<sup>th</sup> Street

Laramie WY 82070

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*Working to protect and restore Western Watersheds and Wildlife*

---

April 25, 2019

Governor Mark Gordon  
Idelman Mansion  
2323 Carey Avenue  
Cheyenne, Wyoming 82002

Director Brian Nesvik  
Wyoming Game and Fish Department  
5400 Bishop Boulevard  
Cheyenne, Wyoming 82006

Via email to [wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

Dear Governor Gordon and Game and Fish Director Nesvik:

The following are the comments of Western Watersheds Project, American Bird Conservancy, Bighorn Audubon, WildEarth Guardians, Center for Biological Diversity, Council for the Bighorn Range, Prairie Hills Audubon Society, Black Hills Clean Water Alliance, Wyoming Wilderness Association, and Upper Green River Alliance on the Wyoming state sage-grouse Executive Order (“Wyoming plan”). The Wyoming plan is an improvement over the level of sage-grouse conservation measures that preceded it, but in many respects falls well short of minimum levels of protection established in the scientific literature. We recommend that the science-based shortcomings of the Wyoming plan be rectified in order to maintain current populations and, in areas where sage-grouse populations remain in danger of further decline or extirpation, restore populations to healthy and secure levels.

Due in large measure to its large expanses of sagebrush steppe habitat and its low human population density, Wyoming has the largest remaining greater sage-grouse population of any state. The Wyoming statewide population comprises 35% of the remaining sage-grouse in the United States, with three of the largest nesting concentrations left along the Atlantic Rim, in the northeastern Red Desert, and in the Upper Green River Valley. However, these populations face continuing stressors and current populations are a small fraction of historic population densities and continue to decline. In 1910, George Bird Grinnell, one of America’s foremost naturalists of the 19th Century, recounted a Wyoming experience viewing sage grouse before the big declines:<sup>1</sup>

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<sup>1</sup> Grinnell, G.B. 1910. American game bird shooting. New York, NY: Forest and Stream Publishing Company, 558 pp.

In October, 1886, when camped just below a high bluff on the border of Bates Hole, in Wyoming, I saw great numbers of these birds, just after sunrise, flying over my camp to the little spring which oozed out of the bluff 200 yards away. Looking up from the tent at the edge of the bluff above us, we could see projecting over it the heads of hundreds of the birds, and, as those standing there took flight, others stepped forward to occupy their places. The number of Grouse which flew over the camp reminded me of the old time flights of Passenger Pigeons that I used to see when I was a boy. Before long the narrow valley where the water was, was a moving mass of gray. I have no means whatever of estimating the number of birds which I saw, but there must have been thousands of them.

It seems likely that few, if any, Wyoming residents are still alive who can recount such large population densities of sage-grouse, and today this species is present only sparsely on the landscape.

The Wyoming plan centers on focusing protections on Core Areas, a sound concept that has been extended West-wide through the designation of corresponding Priority Habitat Management Areas on federal public lands. Heinrich et al. (2017) found that 58-69% of sage-grouse in Wyoming could be expected to nest and summer within designated Core Areas, with the percentage decreasing over time. The same study highlighted the need to provide additional connectivity protections (*and see* Row et al. 2018), particularly for isolated Core Areas, and winter habitat protections, especially in southwestern Wyoming.

The Wyoming plan was originally generated through a political process, a collaboration in which stakeholders could (and did) hold negotiations hostage through blocking consensus to extract concessions for their industries that are incompatible with sage-grouse conservation. As a result, the Wyoming plan departs from scientifically valid protection levels in ways that undermine the conservation of sage-grouse in the Core Areas established under the plan for their protection. These departures, outlined in greater detail below, include inadequate protective buffers around leks, excessively permissive thresholds of surface disturbance percentage, scientifically invalid methods of calculating site density and surface disturbance limits, an absence of scientifically credible protections for winter habitats, a complete absence of standards governing noise pollution in sensitive sage-grouse habitats, a complete absence of conservation measures addressing impacts of livestock grazing, and the gerrymandering of Core Area boundaries to exclude undisturbed habitats of high sage-grouse density to accommodate future development incompatible with sage-grouse conservation. We will address each of these shortcomings in turn.

### **The 0.6-mile lek buffer in the Wyoming plan is scientifically invalid**

The Wyoming plan proposes a No Surface Occupancy (NSO) buffer of 0.6 mile around lek sites, to prevent construction of roads, mines, powerlines, wellsites, or other industrial development. This lek buffer size is too small to effectively prevent the extirpation of lek

populations, based on the available science. The lek site, where displaying and breeding occurs each spring, is the hub of nesting activity. According to Taylor et al (2012: 27),

[F]emale sage-grouse that visit a lek use an approximately 9-mi (15-km) radius surrounding the lek for nesting; a 2-mi (3.2-km) radius encompasses only 35-50% of nests associated with the lek (Holloran and Anderson 2005, Tack 2009). While a lek provides an important center of breeding activity, and a conspicuous location at which to count birds, its size is merely an index to the population dynamics in the surrounding habitat. Thus attempting to protect a lek, without protecting the surrounding habitat, provides little protection at all.

Holloran and Anderson (2005) found in Wyoming that sage grouse nest within 5.3 miles of the lek site. Sage-grouse show strong fidelity to their lek sites, so much so that they return year after year to exactly the same locations to dance and mate.

There have been a number of scientific studies, heavily focused on Wyoming, that demonstrate that lek buffers greater than the 0.6-mile standard applied under the Wyoming plan are necessary to maintain current sage-grouse populations in the face of industrial development. The seminal study was funded by the oil and gas industry and conducted by Holloran (2005), and it found significant negative impacts from both access roads (even when shielded from the lek by intervening topography) and individual producing (post-drilling) oil and gas wells within 1.9 miles from active leks. Measurable impacts on sage-grouse from coalbed methane development in northeast Wyoming were found to extend out to 4 miles (Walker 2008), and subsequent research has recorded effects as far away as 12.4 miles from leks (Taylor et al. 2012). Holloran et al. (2007) found that yearling sage grouse avoided otherwise suitable nesting habitat within 930m (almost 0.6 mile) of oil and gas-related infrastructure. This means that individual wellsites, and their access roads and other related facilities, will be surrounded by a 0.6-mile band of habitat that has substantially lost its habitat capability for use by nesting grouse and is completely inadequate as buffer. Gibson et al. (2018) found that significant negative effects on sage-grouse extended 1.5 to 7.8 miles from powerlines. The National Technical Team (2011: 20) observed, “it should be noted that protecting even 75 to >80% of nesting hens would require a 4-mile radius buffer (Table 1). Even a 4-mile NSO buffer would not be large enough to offset all the impacts reviewed above.” Importantly, a 0.6-mile lek buffer covers by area only 2% of the nesting habitat encompassed by a 4-mile lek buffer, which takes in approximately 80% of nesting grouse according to the best available science.

The consequences of industrial development in the context of inadequate lek buffers are reductions in population size and persistence. State researchers, using lek buffers of 0.25 mile, 0.5 mile, 0.6 mile, 1.0 mile, and 2.0 mile, estimated lek persistence of 4, 5, 6, 10, and 28 percent, respectively (Apa et al. 2008). Standard energy development within 2 miles of a lek has been projected to reduce the probability of lek persistence from 87% in areas with no development to 5% (Walker et al. 2007). Applying these calculations, which were officially commended to the Wyoming Game and Fish Director by state sage-grouse researchers Tom Christiansen and Joe Bohne, the 0.6-mile lek buffers currently in place in the state plan

would be predicted to yield a 6% chance of lek persistence when applied to development (*see* Apa et al. 2008, Attachment 1).

By contrast, no scientific study has ever recommended a lek buffer of 0.6 mile as an adequate conservation measure. Males use shrubs within 1 km (0.6 mi) from a lek for foraging, loafing, and shelter (Rothenmeier 1979, Autenreith 1981, Emmons and Braun 1984). None of these studies postulate that protection of loafing males during the breeding season is the appropriate level of protection for breeding and nesting activities that occur on the lek and in surrounding habitats. Nor do they even suggest that siting development immediately outside this “loafing zone” will prevent displace of loafing males (let alone protect females during breeding or nesting habitats). Indeed, the best available science (Holloran 2005) specifically tested this hypothesis and found that lek populations during the breeding season declined when producing wells were sited within 1.9 miles of leks and when active drilling occurred within 3.1 miles of leks; this study made no attempt to quantify the buffers needed to protect nesting activities. Therefore, a 0.6-mile is inappropriate even for preventing impacts to breeding birds, much less nesting birds.

By comparison, an interagency team of sage-grouse experts from state and federal agencies performed a comprehensive review of the scientific literature and recommended a 4-mile lek buffer for siting industrial development in sage-grouse habitat (National Technical Team 2011), a prescription in greater accord with the science. Apa et al. (2008, emphasis added) reviews the best available science by a team of state sage grouse biologists, and states,

“Yearling female greater sage-grouse avoid nesting in areas within 0.6 miles of wellpads, and brood-rearing females avoid areas within 0.6 miles of producing wells. This suggests a 0.6-mile buffer around all suitable nesting and brood-rearing habitat is required to minimize impacts to females during these seasonal period.” This report further clarifies, “These suggest that all areas within at least 4-miles of a lek should be considered nesting and brood-rearing habitats in the absence of mapping.”

Thus, state experts in this report in effect recommended a 4.6-mile NSO buffer around active leks. This recommendation is buttressed by the findings of Holloran et al. (2007) that yearling sage grouse avoided otherwise suitable nesting habitat within 930m (almost 0.6 mile) of oil and gas-related infrastructure. This means that individual wellsites, and their access roads and other related facilities, will be surrounded by a 0.6-mile band of habitat that has substantially lost its habitat capability for use by nesting grouse. Aldridge and Boyce (2007) suggested that even larger buffers of 10 km (6.2 miles) are warranted. Manier et al. (2014) subsequently reviewed all available science and reported an “interpreted range” of appropriate lek buffers ranging from 3.1 to 5 miles. The Wyoming plan’s 0.6-mile lek buffers are clearly outside this “interpreted range.”

We recommend that, at a minimum, in all Core Area lands a 5.3-mile buffer preventing surface occupancy or disturbance, including the siting of industrial infrastructure or facilities, should apply around leks (after Doherty et al. 2011), and that within this buffer, any existing powerlines must be buried or removed.

## **The 5% surface disturbance threshold in the Wyoming plan is scientifically invalid**

Knick et al. (2013) concluded that 99% of the active leks in the study area (encompassing the entire western range of the greater sage grouse) were surrounded by habitat with 3% or less surface disturbance (defined using GIS as residential or industrial development). Kirol (2012), found for his Wyoming study area that surface disturbance greater than or equal to 4% of the land area had a significant negative impact on greater sage grouse brood rearing habitat. Thus, a limit of 3% surface disturbance is necessary within Core Areas to prevent lek population declines from excessive density of infrastructure and/or facilities.

The federally-convened National Technical Team (2011: 7, internal footnote omitted) was particularly explicit regarding the necessity to implement the 3% disturbance threshold rigorously, in outlining the following land management prescriptions:

Manage priority sage-grouse habitats so that discrete anthropogenic disturbances cover less than 3% of the total sage-grouse habitat regardless of ownership. Anthropogenic features include but are not limited to paved highways, graded gravel roads, transmission lines, substations, wind turbines, oil and gas wells, geothermal wells and associated facilities, pipelines, landfills, homes, and mines.

- In priority habitats where the 3% disturbance threshold is already exceeded from any source, no further anthropogenic disturbances will be permitted by BLM until enough habitat has been restored to maintain the area under this threshold (subject to valid existing rights).
- In this instance, an additional objective will be designated for the priority area to prioritize and reclaim/restore anthropogenic disturbances so that 3% or less of the total priority habitat area is disturbed within 10 years.

There is no scientific evidence, however, indicating that sage grouse can tolerate a greater percentage of surface disturbance. Indeed, a limit of 5% surface disturbance allows full-field oil and gas development at the standard wellsite density for full-field development of 160-acre spacing (four wellsites per square mile), which has been shown to cause lek populations to decline to extirpation. In order to bring the Wyoming plan into compliance with the best available science, the disturbance percentage threshold allowed in Core Areas should be reduced from 5% to 3%.

## **Application of site density and disturbance percentage thresholds based on the Disturbance Density Calculation Tool (DDCT) is scientifically invalid**

The amount of cumulative disturbance allowed in sage-grouse core habitat at the project analysis area scale is calculated by an algorithm known as the Density Disturbance Calculation Tool (“DDCT”). But this tool essentially allows projects to average out their cumulative disturbance over a much greater land base than will actually be impacted, masking high-density disturbance effects in a localized area. The DDCT is used to establish an area for measuring the amount of disturbance that may be allowed under a project

proposal. The DDCT essentially buffers a proposed project area by 4 miles, identifies all occupied leks within this area and buffers them by 4 miles, and uses the combined area as the denominator to calculate the total land area from which to derive the total percentage of land that could be disturbed by the project. This results in well densities and percentage of surface disturbance that exceed the 1 well per square mile and 3% disturbance thresholds of significant impact to sage grouse populations within individual project areas. In cases where the DDCT area/project analysis area is very large, more than one well or mine site is permitted to be developed in a given square mile as long as the surrounding Priority Habitat lands are relatively free from other development disturbance. This allows a density of wellsites that exceeds science-based thresholds at which significant impacts to sage grouse inhabiting the habitat in question begin to occur. Indeed, it is apparent that the DDCT method was specifically developed to allow industrial projects in Core Areas at levels of disturbance known to be incompatible with sage-grouse population survival.

The Lost Creek Uranium In Situ Recovery Project in the northern Red Desert of Wyoming exemplifies how development can exceed disturbance and density limits under the DDCT. The 4,254-acre permit area is located inside a Core Area, and it intersects the 4-mile buffers of 15 sage-grouse leks.<sup>2</sup> The DDCT area for this project is 147,060 acres, almost 230 square miles. If this were a hypothetical oil and gas project with the same 147,060-acre DDCT area, 229 wells would be allowed in the 4,254-acre permit area, for a density of 34.4 wellsites per square mile within the permit area. Within the actual perimeter of development, wellsite density will exceed 50 wells per half-section, or 100 wellsites per square mile. This extreme density would destroy habitat function for sage-grouse locally, even though well density for the DDCT area would still be within the one well per square-mile limit in the Core Area strategies.

In the case of the Lost Creek project, the extra-large DDCT area allowed intense development within the permit area. The project expects to disturb (i.e., bulldoze) 345 acres, which, when combined with preexisting disturbance, amounts to less than one percent for the DDCT area, but when compared to the 4,254-acre permit area, would yield 8.1 percent disturbance, far above the stated limit in the state and federal Core Area strategies. Virtually all development in this project was planned to occur along the ore trend, meaning that the actual density within the developed portion of the Permit Area will be much greater than 8.1%. The DDCT area for this project, by contrast, totals 147,060 acres, yielding a percent disturbance of less than 1% when considering the existing and proposed disturbance according to the current calculation protocol. The 345-acre development area also violated the strategies' limitation on site density. The DDCT assumes individual development sites (like oil and gas wells) will only each affect 4 to 5 acres. But for this project, the state wildlife agency classified the entire 4,254-acre development area as a single "site," which, although it meets the one site per square mile requirement, will eliminate half of a square mile section of directly bulldozed habitats within the 4,254-acre project area where it is located, and certainly have deleterious effects on sage-grouse for miles around. The DDCT area for this project is so large that 229 oil and gas wellsites could have been permitted within the six-square-mile project area (or 38 wellsites per square mile) without exceeding the putative one wellpad per square mile limit on site density for the DDCT analysis area. The Wyoming plan must

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<sup>2</sup> Calculations derived from data presented in the Lost Creek In Situ Recovery Project Final EIS at ES-2, 4.9-8, 4.9-27, and Appendix D.

prevent this type of excessive development through scientifically sound calculation methods for site density and disturbance percentage.

Knick et al. (2013) measured disturbance across an area much smaller (a 3-mile buffer around leks) than a DDCT area. A DDCT analysis area can exceed 225 square miles based on the BLM analysis of the Lost Creek uranium project. Therefore, 5% surface disturbance as measured across a DDCT area is an even higher percentage of surface disturbance when calculated using the Knick et al. (2013) protocol.

A number of scientific studies (including Holloran 2005, Doherty 2008, Walker et al. 2007a, Tack 2009, Taylor et al. 2012, and Copeland et al. 2013) have determined that significant sage-grouse population declines occur when site density of industrial facilities exceeds one site per square mile. Importantly, none of these studies calculate site density using the DDCT method, or using comparably-sized areas. The National Technical Team (2011) recommended that disturbance density be calculated per square-mile section, based on their review of the best available science. This is supported by subsequent scientific study by Knick et al. (2013), who found that a limit of 3% development (based on a 3-mile buffer around leks) was the threshold beyond which sage grouse populations were rarely able to sustain themselves. Accordingly, disturbance caps and site density in Core Areas need to be calculated on a per-square-mile-section basis in order to maintain developed areas at levels compatible with sage-grouse persistence, per the recommendations of the National Technical Team (2011).

### **Strong protections for winter concentration areas must be added**

It is not sufficient to protect merely the breeding, nesting, and brood-rearing habitats; if sage-grouse cannot survive the winter due to degradation or industrialization of their winter habitats, populations will necessarily decline toward extirpation. In Wyoming, Core Areas were designated on the basis of buffers around active lek sites, which encompass the breeding and nesting habitats used by grouse during spring and summer. But protecting wintering habitats is equally important to assuring the continued existence and ultimate recovery of the species, and these wintering habitats are frequently located outside the protective boundaries of designated Priority Habitats. BLM's analysis highlights the importance of protecting these habitats: "Doherty et al. (2008) demonstrated that Greater Sage-Grouse in the Powder River Basin avoided otherwise suitable wintering habitats once they have been developed for energy production, even after timing and lek buffer stipulations had been applied." Buffalo RMP Revision DEIS at 367. In addition, Carpenter et al. (2010) found that wintering sage grouse avoided otherwise suitable habitats within a 1.2-mile radius of wellsites. Dzialek et al. (2012: 12) confirmed these relationships for wintering sage grouse in Wyoming, and concluded:

First, we can say with increasing confidence that the winter pattern of occurrence among sage-grouse shows consistency throughout disparate portions of its distribution. Second, avoidance of human activity appears to be a general feature of winter occurrence among sage-grouse.

This indicates a broad consistency in sage-grouse sensitivity to human development in wintering habitats throughout the species' range.

Distance from development and density of development are key factors in developing winter concentration area protections. Holloran et al. (2015) determined that increasing wellpad density had a negative impact on sage-grouse winter habitat use regardless of whether liquid gathering systems were used to reduce human activity levels or not. The study also found a negative impact of wellsites within 1.75 miles on wintering grouse, even in cases where liquid gathering systems were used to reduce road traffic.

In accordance with the best available science, the State of Wyoming should map wintering habitats statewide and apply the following restrictions on development in designated winter habitats: (1) close all lands within 1.2 miles of winter concentration areas to future oil and gas leasing, coal location, non-energy minerals leasing, mineral materials sales, and seek withdrawal of these lands from locatable mineral entry; (2) for valid existing lease rights, apply a limit of 3% surface disturbance and one energy or mining site per square-mile section, and exclude new surface occupancy within 1.2 miles of winter concentration areas.

At present, only timing limitations apply to industrial projects in winter concentration areas. This is completely inadequate because industrial facilities constructed in the summer will remain throughout every subsequent winter. Timing stipulations fail utterly to address the threat of habitat destruction, habitat fragmentation, displacement of and stress to sage-grouse resulting from vehicle traffic, noise, and human activity along roads and at industrial sites, displacement of grouse and increased predation resulting from overhead powerlines and tall structures, construction of wind farms, and other human intrusions known to disturb, displace, and cause population declines of sage-grouse. For these reasons, winter concentration areas should receive at least the level of protection from permitted industrial activities as recommended by the National Technical Team (2011) for priority habitats.

### **Science-based restrictions on noise must be added**

Advances in science make it increasingly clear that noise from roads or industrial facilities is having a major negative effect on sage-grouse and their ability to make use of otherwise suitable habitats. Noise can mask the breeding vocalizations of sage-grouse (Blickley and Patricelli 2012), displaces grouse from leks (Blickley et al. 2012a), and causes stress to the birds that remain (Blickley et al. 2012b). According to Blickley et al. (2010), “The cumulative impacts of noise on individuals can manifest at the population level in various ways that can potentially range from population declines up to regional extinction. If species already threatened or endangered due to habitat loss avoid noisy areas and abandon otherwise suitable habitat because of a particular sensitivity to noise, their status becomes even more critical.” Noise must be limited to a maximum of 10 A-weighted decibels (dBA) above the ambient natural noise level after the recommendations of Patricelli et al. (2012); the ambient noise level in central Wyoming was found to be 22 dBA (Patricelli et al. 2012) and in western Wyoming it was found to be 15 dBA (Ambrose and Florian 2014, 2015; Ambrose et al. 2015).

Sage-grouse lek population declines occur once noise levels exceed the 25 dBA level. With this in mind, ambient noise levels should be defined as 15 dBA and cumulative noise should be limited to 25 dBA in occupied breeding, nesting, brood-rearing, and wintering habitats, which equates to 10 dBA above the scientifically-derived ambient threshold.

It is reasonable to suppose that if noise that mimics oil and gas truck traffic causes elevated levels of stress-related metabolites in grouse on the lek (Blickley et al. 2012b), that this physiological response would be substantially similar during other parts of this bird's life cycle. Indeed, these researchers stated, "Noise at energy development sites is less seasonal and more widespread and may thus affect birds at all life stages, with a potentially greater impact on stress levels." Patricelli et al. (2012) recognized this explicitly:

"Second, and much more importantly, if noise levels drop down to stipulated levels at the edge of the lek, then much of the area surrounding the lek will be exposed to higher noise levels (see Figures 3 & 4). This management strategy therefore protects only a fraction of sage-grouse activities during the breeding season—mate assessment and copulation on the lek—leaving unprotected other critical activities in areas around the lek, such as foraging, roosting, nesting and brood rearing."

The federal approach of measuring noise exceedances within 0.6 mile of the lek, instead of at the periphery of occupied seasonal habitat, is scientifically invalid because it fails to address noise impacts to nesting habitats, wintering habitats, and brood-rearing habitats. In the Wyoming Basins Ecoregional Assessment (Hanser et al. 2011: 131), the authors pointed out, "Any drilling <6.5 km [approximately 4 miles] from a sage-grouse lek could have indirect (noise disturbance) or direct (mortality) negative effects on sage-grouse populations."

For Wyoming, the ambient noise level should be set at 15 dBA and maximum noise allowed should not exceed 25 dBA to prevent lek declines due to noise.

### **Core Areas should be recommended for closure to future mineral leasing**

Regardless of the intensity level of development, the best outcome for sage-grouse is undeveloped habitat. With this in mind, we recommend that sage-grouse Core Areas be closed to future leasing for fluid minerals and other types of mineral development. If this recommendation were to be implemented, existing oil and gas leases would continue to be developed under the protection levels specified in the Wyoming plan, and if the leaseholders followed through on their due diligence to explore and develop their leases, productive leases would continue to be held by production until minerals were no longer being produced. Unproductive or speculative leases would expire if not produced prior to the end of their 10-year lease terms, and over time the leaseholders would choose either to invest in developing the mineral resource, or allow the lease to remain undisturbed habitat, based on their own choice. Over time, as undeveloped leases expire, Core Areas would come to be predominantly free from oil and gas leases, thereby eliminating future conflicts between oil and gas development and the need for sage-grouse habitat conservation.

### **Conservation measures to address livestock grazing impacts to sage-grouse are needed**

The Wyoming plan defines livestock grazing as a "*de minimis* activity" of no conservation importance, and applies no conservation protections to address its impacts. This is a factual

misrepresentation, and indeed the U.S. Fish and Wildlife Service reviewed the science and determined that livestock grazing posed a principal threat to sage-grouse survival and recovery in its 2010 finding that the greater sage-grouse was ‘warranted, but precluded’ for listing under the Endangered Species Act. It is obvious in Wyoming that livestock grazing is having a major impact on sage-grouse populations, because there are vast areas of the state where grouse populations have declined greatly from historic population levels in the absence of significant road, powerline, mining, and/or oil and gas development. For these parts of the state, livestock grazing is the only human-caused factor that has changed and continues to alter sage-grouse habitats away from their pristine pre-Settlement conditions.

Sage-grouse inhabit wide-open habitats with abundant avian predators, are clumsy fliers, and rely primarily on hiding and camouflage to escape their predators. In this context, maintaining adequate grass cover in sagebrush habitat provides critical hiding cover, without which land managers tilt the scales toward the predators. The increased predation that follows is a direct result of excessive grazing and inadequate livestock management, not the predators themselves. In addition, livestock grazing can lead to cheatgrass invasion and a cycle of frequent range fires that eliminate the sagebrush that sage-grouse need to survive (Reisner et al. 2013).

The best available science has established that at least 7 inches (18 cm) of residual stubble height needs to be provided in nesting and brood-rearing habitats throughout their season of use. According to Gregg et al. (1994: 165), “Land management practices that decrease tall grass and medium height shrub cover at potential nest sites may be detrimental to sage grouse populations because of increased nest predation... Grazing of tall grasses to <18 cm would decrease their value for nest concealment... Management activities should allow for maintenance of tall, residual grasses or, where necessary, restoration of grass cover within these stands.” Hagen et al. (2007) analyzed all scientific datasets up to that time and concluded that the 7-inch threshold was the threshold below which significant impacts to sage-grouse occurred (*see also* Herman-Brunson et al. 2009). Prather (2010) found for Gunnison sage-grouse that occupied habitats averaged more than 7 inches of grass stubble height in Utah, while unoccupied habitats averaged less than the 7-inch threshold. According to Taylor et al. (2010:4),

The effects of grazing management on sage-grouse have been little studied, but correlation between grass height and nest success suggest that grazing may be one of the few tools available to managers to enhance sage-grouse populations. Our analyses predict that already healthy populations may benefit from moderate changes in grazing practices. For instance, a 2 in increase in grass height could result in a 10% increase in nest success, which translates to an 8% increase in population growth rate.

The exception to this 7-inch rule is found in the mixed-grass prairies of the Dakotas, where sparser cover from sagebrush and greater potential for tall grass have led to a recognition that a 26-cm (10.6-inch) stubble height standard is warranted (Kaczor 2008, Kaczor et al. 2011). Foster et al. (2014) found that livestock grazing could be compatible with maintaining sage-grouse populations, but notably stubble heights they observed averaged more than 7 inches during all three years of their study, and averaged more than 10.2 inches in two of the three years of the study.

Scientific results from Wyoming are consistent with the need to maintain 7-inch grass height in sage-grouse habitats. Heath et al (1997) found that near Farson, Wyoming, nests with taller grass heights were more successful than those with shorter heights. Holloran et al. (2005) found that residual grass height and residual grass cover were the most important factors correlated with sage-grouse nest success in their central and southwestern Wyoming study area, with habitats with the tallest and densest grasses showing the greatest nest success. Doherty et al. (2014) found a similar relationship between grass height and nest success in northeast Wyoming and south-central Montana but did not prescribe a recommended grass height. While there are those who have attempted to cast doubt on the necessity of maintaining grass heights to provide sage-grouse hiding cover, based on timing differences in grass height measurements between failed nests and successful nests, these concerns have been scientifically refuted for Wyoming. The significance of the Doherty et al. (2014) study was explicitly tested by Smith et al. (2018), who confirmed that grass height continued to have a significant effect on nest success for this Wyoming study after correction factors were applied to the data.

Connelly et al. (2000) reviewed the science of that time and recommended an 18-cm (7-inch) residual stubble height standard. Stiver et al. (2015) also recommended 18-cm (7-inch) grass height for all breeding and nesting habitats, and explicitly stated that this and other established measures should not be altered unless scientific evidence definitively indicates that the 7-inch threshold is inappropriate. There is no such scientific evidence for Wyoming indicating that the 7-inch threshold is inappropriate, and therefore this 7-inch (18 cm) residual grass height standard should be added as a requirement in the Wyoming plan. In addition, Braun (2006) recommended a maximum 25% forage utilization standard for livestock (*and see* Holechek et al. 2010). Controlling forage utilization levels confers numerous benefits on sage grouse and their habitats, and we recommend applying a standard in the Wyoming plan that sets 25% forage utilization as the maximum for livestock grazing in Core Areas.

Barbed-wire fencing of the type commonly employed to control domestic livestock presents multiple impacts for sage-grouse. Fences used for livestock management pose a major threat to sage-grouse. Stevens et al. (2013) found that fence collisions are an important source of grouse mortality, and fences on flat areas near leks were a particularly high risk for causing sage-grouse fatalities. Christiansen (2009) documented 146 sage-grouse fence collisions and mortalities along a 4.7-mile length of barbed-wire fence in western Wyoming over a 2½-year period. Studies have found that marking fences only reduce sage-grouse collisions by as little as 57%, such that up to 43% of the collisions on unmarked fences continue to occur on marked fence sections (Van Lanen et al. 2017). The BLM's National Technical Team (2011) recommended that unused fences should be removed, and their rights-of-way withdrawn. Removal of this existing fencing would decrease potential raptor perching and subsequently the indirect impacts of raptors preying on grouse as and other prey species. The removal of fencing could also eliminate any direct mortality due to grouse colliding with problem fences.

In addition, stock watering reservoirs (as well as coalbed methane retention ponds) provide breeding habitat for mosquitoes that carry West Nile virus. West Nile has been implicated in major sage-grouse population declines in the Powder River Basin (Doherty 2007, Walker et al. 2007a, Walker and Naugle 2011), and presents an ongoing threat to sage-grouse (Taylor et

al. 2012), which have demonstrated little to no ability to develop a natural immunity to this non-native disease (Walker et al. 2007b). Accordingly, new stock watering (or fluid mineral production) reservoirs should be prohibited in Core Areas, and existing manmade reservoirs should be breached and eliminated to the extent possible.

In sum, the Wyoming plan should strike the “*de minimis*” description of livestock grazing, recognize its potential for serious and widespread impacts to sage-grouse habitats, and add standards to maintain and improve sage-grouse habitats. These should include a 7-inch residual grass height standard for sage-grouse breeding, nesting, and brood-rearing habitats in the context of livestock grazing, a prohibition on new fence and reservoir construction, and guidance to reduce or eliminate existing fences and small manmade reservoirs inside sage-grouse habitats.

### **High-density grouse habitats gerrymandered out of Core Area designations should be protected**

One of the foundational fictions of the Wyoming state sage-grouse plan is that Core Area boundaries were designated on the basis of science, and all areas of high grouse density and undeveloped habitat quality were protected in Core Areas. The reality is quite different. At the outset of the State’s consensus-based Core Area mapping process, the original boundaries of Core Areas were drawn to exclude high-density sage-grouse habitats that extractive industries were interested in developing, particularly in the Powder River Basin, Atlantic Rim area, and upper Green River Valley (*see* Attachment 2). As a result, thousands of acres of undeveloped habitat were denied protection despite their vibrant sage-grouse populations and relatively undeveloped condition. Some of these (the Jonah Field is a great example) have been essentially destroyed for the purposes of sage-grouse habitat effectiveness. After the original round of politically-driven alterations of Core Area boundaries were finalized, further reductions occurred, eliminating thousands more acres of important sage-grouse habitats originally designated as Core Areas such as those granted for the DKRW coal-to-liquids project, Atlantic Rim coalbed methane project, Whirlwind LLC White Mountain wind farm, and Chokecherry-Sierra Madre wind farm (*see* Attachment 3), excluding lands that are within 5.3 miles of the highest-population leks that represent the smallest area encompassing 75% of the Wyoming sage-grouse population. The Wyoming plan should be improved by expanding Core Areas to encompass lands within the 75% breeding density as outlined in Doherty et al. (2010), which continue to have active sage-grouse leks associated with them.

### **Conclusions**

The significant biological inadequacies of the Wyoming plan are not a matter of conjecture or guesswork; Copeland et al. (2013) modeled the population consequences of the Wyoming state plan, and found that if all of the State of Wyoming sage-grouse policy provisions (which include a 5% disturbance cap calculated using a Disturbance Density Calculation Tool) were implemented fully and to the letter (and thus far, they have not been), that a 9 to 15% decline in greater sage-grouse populations would still occur statewide, including a 6 to 9% decline within designated Core Areas (where the 5% disturbance cap would be applied).

Populations statewide continue to decline over the long term with the exception of slight increases in Jackson Hole and the Bighorn Basin (Edmunds et al. 2018), even in the absence of significant mineral development linked to a bust in coal and natural gas commodity prices during the last decade. The viability of the regional sage-grouse population in northeast Wyoming continues to be in doubt (*see* Attachment 5, and some scientists have characterized this population as being in the extinction vortex (*see* Garton et al. 2015, Attachment 6). According to BLM (2013: 2-14), “The Powder River population has a high (86 percent) probability of falling below 200 males by 2017, from stressors including West Nile virus and impacts of energy development (USFWS 2013).” This is a key linkage to sage-grouse populations in Montana and the Dakotas (*see* Row et al. 2018, Fig. 4). From a practical standpoint, it is in the mutual interest of the State of Wyoming, conservationists, and industry interests to recover Wyoming sage-grouse populations to the point where all populations are viable and secure from the threat of extinction. This recovery will not occur as long as a business-as-usual approach is pursued, and Core Area protections become symbolic if they only protect habitats where industry has no plans to develop, and have loopholes for significant human-caused impacts that occur within Core Areas.

We urge you to maintain and strengthen the Wyoming state sage-grouse plan, and to improve it by expanding Core Areas to encompass important habitats that were previously excluded to enable unencumbered industrial development, to strengthen protections to align with the best available science rather than collaboration-based compromises that do not provide for the basic biological needs of the sage-grouse, and to add provisions to address threats to sage-grouse and their habitats that have been omitted from previous iterations of the state sage-grouse Executive Orders. Several key studies are attached; if you have difficulties locating any of the referenced scientific studies, we can provide almost all of them upon request. Recovering the greater sage-grouse to healthy and abundant population levels is the solution that benefits all concerned parties.

Thank you for considering these recommendations,



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## Wind River/Sweetwater River Local Sage Grouse Working Group Comments to Governor Gordon re: Sage-Grouse Executive Order review

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Stan Harter <stan.harter@wyo.gov>

Wed, May 1, 2019 at 2:28 PM

To: wgfd.hpp@wyo.gov

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To whom it may concern,

On behalf of the Wind River/Sweetwater River Local Sage Grouse Working Group (WRSR-LWG), I am pleased to offer the attached comments to Wyoming Governor Mark Gordon for his consideration as he reviews and updates the Wyoming Sage-Grouse Executive Order and Greater Sage-Grouse Core Area Protection Strategy. We hope these comments will greatly assist Governor Gordon in improving an already well proven conservation strategy.

Although we believe there is room for improvement, we wish to offer our support to the entire sage-grouse core area strategy, as it was instrumental in triggering an unprecedented conservation partnership across the western United States that has significantly reduced threats to the greater sage-grouse across 90 percent of the species' breeding habitat. This conservation partnership was also integral in the September 2015 decision by the U.S. Fish and Wildlife Service that greater sage-grouse was not warranted for listing as a threatened or endangered species under the Endangered Species Act.

Thank you for considering our comments.

Sincerely,

Stan Harter (WGFD representative to the WRSR-LWG and acting chairperson)

--

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### 6 attachments



**WRSRLWG SG Exec Order Comments 5-1-2019.docx**  
23K



**Dinkins et al. (2016) - PLoS ONE (1).pdf**  
363K



**Gamo-Beck2017\_Article\_EffectivenessOfWyomingSSage-Gr.pdf**  
1057K



**EdmundsEtAl\_JWM\_2017.pdf**  
2962K



**Copelandetal\_CoreAreaStrategy\_2013.pdf**

4573K



**Smith2016\_Article\_DoesWyomingSCoreAreaPolicyProt (1).pdf**

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The Wind River/Sweetwater River local sage-grouse working group greatly appreciates the opportunity to provide feedback to Wyoming Governor Mark Gordon as he reviews and updates Wyoming's existing Greater Sage-grouse Executive Order (SGEO).

As greater sage-grouse populations declined over the past several decades, the species was considered for listing under the Endangered Species Act (ESA). In September 2015, the U.S. Fish and Wildlife Service determined that protection for the greater sage-grouse under the Endangered Species Act was not warranted and withdrew the species from the candidate species list. The Service's decision followed an unprecedented conservation partnership across the western United States that has significantly reduced threats to the greater sage-grouse across 90 percent of the species' breeding habitat. That partnership was formulated around the basic principle of Wyoming's greater sage-grouse core area strategy first developed under the leadership of then-Governor Dave Freudenthal via the first Wyoming Sage-grouse Executive Order, which was continued through Governor Matt Mead's tenure with an updated Sage-grouse Executive Order.

The Wind River/Sweetwater River Local Working Group (WRSR-LWG) offers the following comments and recommendations to Governor Mark Gordon to assist him in improving on an already effective sage-grouse conservation strategy. Identification, protection, and monitoring of the Core Areas are essential to the success of the Greater Sage-grouse Core Area Protection strategy. Most parts of the existing SGEO are satisfactory for accomplishing sage-grouse conservation, but we believe the following comments would lead to greater success.

**Related to Page 2 of 7 – WHEREAS Statements 3 – 5:** These statements all identify that the (ESA) listing of the Greater sage-grouse would have a significant, adverse effect on land and natural resource management, the economy, and the custom and culture of the State of Wyoming.

**WRSR-LWG comment** – These 3 statements repeatedly identify the significant, adverse impacts a "Threatened" or "Endangered" listing under the Endangered Species Act would have on the State of Wyoming. While certainly true, a more resounding issue is that extirpation of sage-grouse would have a permanently significant and adverse effect on the State of Wyoming, its citizens, and the entire sagebrush ecosystem. This language should be included in the revised Sage-grouse Executive Order.

**Related to Page 2 of 7 – WHEREAS Statement 10:** states that "Wyoming's Greater sage-grouse Core Area Protection strategy protects significant quantity and quality of sage-grouse habitat and protects a substantial portion of Wyoming's Greater sage-grouse."

**WRSR-LWG comment #1-** We are concerned with recent changes from the Trump Administration that "rolled-back" rules pertaining to oil and natural gas leasing and development. We are concerned that these rule changes may severely erode the effectiveness of the previously established rangewide conservation strategies and partnerships that led to

the September 2015 listing decision of “not warranted”. We recommend the new SGEO contain language ensuring the continuation and enhancement of Wyoming’s Greater sage-grouse core area strategy that would preclude leasing and development of oil and natural gas resources in the highest density areas – thereby protecting the “Core-of-the-Core” sage-grouse habitats, such as the recently debated “Golden Triangle”. At the discretion of the Governor, an elevated mechanism for increased protection of these extremely high quality sage-grouse habitats should be developed. To accomplish the intent of this comment, the updated SGEO should not only include language to that effect, but also provide direction for the Wyoming Game and Fish Department to work cooperatively with stakeholders to identify and designate special management areas for sage-grouse within existing core areas that would be excluded from future availability for leasing and development (oil, natural gas, and to the extent possible in-situ uranium mining). Although the SGEO is an effective method of identification and prioritization of sage-grouse conservation, the Department of Interior (DOI) and Bureau of Land Management (BLM) will need to be fully committed to this “no-leasing” option in order to be successful, which would likely require amendments to existing BLM Resource Management Plans (RMPs). Another way to address this issue is to actually follow the current Executive Order’s direction on Page 5, Item #13, which directs efforts to focus and prioritize development outside core areas, rather than within core areas.

**WRSR-LWG comment #2** - To answer the question "Are sage-grouse populations responding positively to the Core-Area Strategy?" and to validate this WHEREAS statement, a comprehensive comparison between annual peak male attendance, percentage of active leks, and percentage of abandonment rate between Core and non-Core leks should be completed. The evaluation time-scale should begin 5 years prior to the year of implementing the Core Area strategy and proceeding to the present. These metrics should then be compared to percentage of disturbance that has occurred within those respective areas, at both statewide and LWG area scales.

**Related to Page 4 of 7 - Section #1:** State agencies shall strive to maintain consistency by following the procedures outlined in this Executive Order.... However, section #5 on page 4 states that “Land uses and activities inside Core Population Areas for which stipulations have not been developed in the Executive Order may be authorized on a case-by-case basis....

**WRSR-LWG comment** - This should be corrected to state that all proposed uses and activities should have specific stipulations developed by Wyoming Game and Fish Department (WGFD). It appears that the BLM is deferring to the WGFD for specific stipulations, so the state should make these specific stipulations based on the goal of successful sage-grouse conservation.

**Related to Page 5 of 7 - Sentence #7:** "Development consistent with the stipulations set forth in Attachment B shall be deemed sufficient to demonstrate that the activity will avoid negative impacts to Greater sage-grouse."

**WRSR-LWG comment** - We are concerned about the exceptions previously granted within sage-grouse core areas. The stipulations defined by WGFD should be biologically oriented to protect the sage-grouse without exceptions.

**Related to Attachment A, page 5 of 7 – Connectivity Areas**

**WRSR-LWG comment** - Although there are no Connectivity Areas designated within the conservation area covered by the Wind River/Sweetwater River Local Working Group, we wish to express our concerns about the negative impacts energy development could have within Core Areas throughout our area and all of Wyoming. We encourage the new SGEO include language to ensure that no core areas become fragmented by development to the degree connectivity between sage-grouse populations is lost. We would like to see something that mirrors the intent of the “Wyoming Game and Fish Department Ungulate Migration Corridor Strategy” and Wyoming Migration Initiative through the USGS Wyoming Cooperative Fish and Wildlife Research Unit at the University of Wyoming.

**Related to Attachment A, page 5 of 7 – Winter Concentration Areas**

**WRSR-LWG comment** – Identification and designation of Winter Concentration Areas within Core Areas seems confusing under the existing SGEO. We ask that the updated SGEO include language providing more clearly defined direction for identification and designation of Winter Concentration Areas within Core Areas and outside Core Areas.

**Related to Attachment B, page 2 of 16 - Maximum Density and Disturbance Process and/or Attachment D:**

**WRSR-LWG comment** - In order to provide consistency between the Density and Disturbance Calculation Tool (DDCT) analyses, a uniform method of determining a proposed project's boundary should be developed and applied, thus preventing a project proponent expanding the analysis boundary to accommodate development at a greater density than is intended by the SGEO.

**General comments regarding sage-grouse conservation in Wyoming – not tied to a specific part of the existing Sage-Grouse Executive Order:**

We would like the new SGEO to include language that focuses on the identification and treatment of threats from invasive plants, with cheatgrass (*Bromus tectorum*) being a greatly accelerating threat to Wyoming's native plant communities.

Our group discussed the apparent lack of literature that evaluates the efficacy of Wyoming's core area sage-grouse conservation strategy. Although such literature may be well known by the Governor's Sage Grouse Implementation Team (SGIT) and others, we were not fully aware of their existence. Therefore, we have attached a few papers that start to get at that question. This collection of papers demonstrates that there is no simple answer, and we are sure there are other references available that attempt to answer this question.



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## WYDOT Comments - Sage-Grouse Executive Order

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**Susan Elliott** <susan.elliott@wyo.gov>

Wed, May 1, 2019 at 9:02 AM

To: WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

Cc: Erica Legerski &lt;erica.legerski1@wyo.gov&gt;, Angela Bruce &lt;angela.bruce@wyo.gov&gt;, Bob Budd &lt;bob.budd@wyo.gov&gt;, Beth Callaway &lt;beth.callaway@wyo.gov&gt;, Shelby Carlson &lt;shelby.carlson@wyo.gov&gt;, Keith Fulton &lt;keith.fulton@wyo.gov&gt;, Mark Gillett &lt;mark.gillett@wyo.gov&gt;, Luke Reiner &lt;luke.reiner@wyo.gov&gt;, Scott Gamo &lt;scott.gamo@wyo.gov&gt;

Please find WYDOT's comments on the Sage-Grouse Executive Order attached.

If you have questions, feel free to contact Scott Gamo, Environmental Services Manager, at 307-777-4379.

Thank you,  
Susan

Susan Elliott  
Executive Assistant to the Director  
Wyoming Department of Transportation  
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# **WYOMING** Department of Transportation

*"Providing a safe, high quality, and efficient transportation system"*

5300 Bishop Boulevard, Cheyenne, Wyoming 82009-3340



April 30, 2019

The Honorable Mark Gordon  
Governor  
State of Wyoming  
Idelman Mansion  
2323 Carey Avenue  
Cheyenne, WY 82002-0010

Dear Governor Gordon:

We appreciate the opportunity to review and provide suggestions to consider in the drafting of Governor Gordon's Sage-Grouse Executive Order. We have focused on items specific to the Wyoming Department of Transportation (WYDOT) and the administration, management and operation of highways across the state of Wyoming. Article 16, Section 9 of Wyoming's Constitution gives the legislature the "power to provide for the improvement of public roads and highways." W.S. 24-2-101 establishes the department of transportation and the Transportation Commission of Wyoming. Title 24 also lays out the authority of the department and the commission to designate, construct, and maintain state highways and, in W.S. 24-2-102, to [a]quire, maintain and manage real property" necessary for public highways. Most existing WYDOT right-of-way (ROW) boundaries, as well as the roadways and activities (transportation, construction, maintenance) that occur within them, have existed or occurred since long before 2008 and should be considered existing rights as provided in bullet #2 on page 4 of 7 and elsewhere in the current SG Executive Order. The reference to existing rights combined with the services we provide to the general public and commercial commerce provide much of the basis for our suggested changes and additions to the SG Executive Order. In addition, unlike industries such as oil and gas, for which much of the basis of the provisions within past Executive Orders were developed, road/transportation projects do not have the ability to move out of core area into non-core area. Rather, state and federal highways are essentially permanent features on the landscape.

Specific Comments:

Bullet number 2 on page 4 of 7- valid existing rights-

We recommend including county, state, and federal highways in portions of this paragraph as follows:

“Examples of existing activities include oil and gas, mining, agriculture, *county roads, state and federal highways*, processing facilities, housing and other uses that were in place prior to the development of Core Population Areas. Federal and state permitted activities, within a defined project boundary (such as a recognized federal oil and gas unit, drilling and spacing unit, mine plan, subdivision plat, utility ROW, *road or highway ROW*, grazing allotment, etc), shall be allowed to continue within the existing boundary even if the use exceeds recommended stipulations (see attachment A, Figure 1).”

Bullet number 6, same section- We suggest changing the opening sentence to “All agencies and departments of the state of Wyoming are committed to compliance with the SGEO and shall prioritize the maintenance and enhancement of .....”

Under attachment C page 1 of 3- We suggest including the following language for paragraph 3:

“State and federal highways are established and authorized by WYDOT and the Federal Highway Administration and are placed to serve the general public and commercial enterprise for the purpose of transport of people, goods, and services, in addition to providing a transport system for national security and emergency services across the state. In order to enable the Wyoming roadway system to function and maintain such services and still provide adequate protection for Greater sage-grouse, activities for the maintenance and re-construction of existing state and county administered roadways (as defined by the ROW boundaries), to include hauling materials on highways for such activities outside of 0.6 miles from an occupied lek are considered “de minimus” provided that these activities occur within the existing ROW.

“In addition, temporary disruptive activities (e.g. topsoil storage, equipment staging excluding of plants and crushers) associated with road/bridge construction immediately adjacent to the ROW and more than 0.6 miles from the perimeter of an occupied lek, limited to a size of 60 meters by 200 meters in size and > 1.2 miles apart, do not violate seasonal stipulations, and are reclaimed to suitable sage-grouse habitat may be considered “de minimus”. Activities that constitute permanent new road construction that occur outside the existing ROW are not considered “de minimus” and may require completion of a DDCT analysis (Pendleton 2015).” We are certainly

open to further discussion of staging/construction area boundary dimensions and the relationship to sage-grouse impacts.

Thank you for the opportunity to review and provide comments for this Executive Order. If you have questions please feel free to contact Scott Gamo, Environmental Services Manager, at 307-777-4379.

Sincerely,

A handwritten signature in blue ink, appearing to read "K. Luke Reiner".Handwritten initials "for" in blue ink.

K. Luke Reiner  
Director

cc: Erica Legerski, Senior Policy Advisor, Office of Governor Mark Gordon  
Angi Bruce, Deputy Director, Wyoming Game & Fish  
Bob Budd, Director, Natural Resource Trust Fund  
Beth Callaway, Governor's Natural Resource Office  
Shelby G. Carlson, P.E., Chief Engineer, WYDOT  
Keith R. Fulton, P.E., Assistant Chief Engineer, Engineering & Planning, WYDOT  
Mark J. Gillett, P.E., Assistant Chief Engineer, Operations, WYDOT



WGFD HPP <wgfd.hpp@wyo.gov>

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## Sage Grouse EO Policy Comments from WBI

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**Jonathan Madill** <JMadill@wyoben.com>

Wed, May 1, 2019 at 9:38 AM

To: "wgfd.hpp@wyo.gov" <wgfd.hpp@wyo.gov>

Attached you will find Wyo-Ben's letter. Thank you for the opportunity to comment.



**WBI WY Sage Grouse EO Policy Comments April 2019.pdf**

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# WYO-BEN, INC.

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April 30, 2019

Governor Mark Gordon  
2323 Carey Avenue  
Cheyenne, WY 82002

## RE: WY Sage Grouse EO Policy Comments

Dear Governor Gordon:

Wyo-Ben Incorporated (WBI) is a 3<sup>rd</sup> generation privately owned bentonite mining company with operations in Big Horn, Washakie, and Hot Springs Counties. WBI has a little over 100 employees at three plant locations located in Greybull, Lovell, and Lucerne. In the Big Horn Basin, commercial scale bentonite mining has been active since the 1970's. WBI has lands within core area boundaries and close to key habitat areas that are impacted by the stipulations and policies of the EO.

WBI appreciates the opportunity to provide comments on the EO and recommend changes that would continue to balance the conservation needs of the species with economic activity. The state of Wyoming has worked tirelessly to develop a strong collaborative approach that has worked well. The following comments are submitted for consideration:

- Sage Grouse Implementation Team (page 2 of EO2015-4): WBI supports the continued reliance on the SGIT to develop grassroots solutions. We believe the SGIT team has helped foster a productive strategy to balance the goal of stable species populations with robust economic activity.
- Valid existing rights (2. page 4 of EO2015-4): There appears to be some confusion as to the concept of "valid existing rights". WBI suggests clarifying language be added to the EO to remove any misunderstanding of the definition. "Valid existing rights" means different things to different industries and permitting agencies. Specifically, there is a significant difference between federal "leasable" versus "locatable" minerals, which is not detailed within the EO. Moreover, we believe that this had led WYGF to make determinations on whether "valid existing rights" apply under proposed actions, which can be problematic given their limited expertise on mineral rights.
- Compensatory mitigation framework (Attachment H of EO2015-4 and July 10, 2017 Revised Greater Sage-Grouse Compensatory Mitigation Framework Scope): WBI believes the compensatory mitigation frameworks is a good first step to develop a process to maintain intact sagebrush landscapes. However, to date there is only a single approved conservation bank within the state and a second area in development. We believe the credit marketplace needs to be broadened. Our concern is the with such high standards and the

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**WYO-BEN.**

## WYO-BEN, INC.

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fact that many landowners may not be interested committing to 50 year protections will disincentivize participation in conservation actions. WBI suggests a broad program with various tiers of credit options to incentivize more participation. A broadened market may spur credit development in many core areas to benefit bird populations across the state, not just a handful of concentrated large banked areas.

- Areas burned by wildfire (Attachment F EO2015-4): WBI suggests a more flexible approach to analyzing and managing wildfire polygons in core areas. Under the current EO, wildfire polygons count towards disturbance. Deviations from disturbance cap thresholds should be considered for unsuitable and/or wildfire transitional areas that can be actively restored back to functional habitat. Rather than maintaining transitional habitat of very little value to the species across the landscape, allowing development that incorporates active restoration commitments could potentially be a net biological benefit to populations.

Thank you for inviting review and comment of the EO policy. We look forward to working cooperatively with the State of Wyoming through this challenging issue. If you haven any questions, please do not hesitate to contact me at [jmadill@wyoben.com](mailto:jmadill@wyoben.com) or 307-765-4446.

Sincerely,

Jonathan Madill

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**Comments regarding Wyoming Sage Grouse Conservation Strategy**

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**Eric Peterson** <wyoeric@gmail.com>

Wed, May 1, 2019 at 10:32 AM

To: wgfd.hpp@wyo.gov

Cc: James Hellyer &lt;jthellyer@wyoming.com&gt;, Margie Taylor &lt;margietay4030@msn.com&gt;, Wanda Burget &lt;wburget@accordresourcesolutions.com&gt;, Wes Sibert &lt;ranchllc@gmail.com&gt;

The Wyoming Conservation Exchange is pleased to respond to the request for comments regarding Wyoming's Sage Grouse Conservation Strategy. Please accept the attachment as our contribution. We would be happy to provide any clarification or elaboration you may require.

ERIC

***Eric Peterson, Administrator*****Wyoming Conservation Exchange**

A free-market platform where landowners can market outcome of good conservation efforts to those seeking to mitigate activities impairing the status of conservation, or to those simply choosing to encourage conservation.

Artemisia LLC,

[607 Mountain Shadows Blvd.](#)[Sheridan, WY 82801](#)[\(307\) 763-7225](#)[wyconex@wyomingconservationexchange.org](mailto:wyconex@wyomingconservationexchange.org)*"The world is run by those who show up!" - Bruce Vincent**"Are you guys ready? Let's Roll!!!" - Todd Beamer (Flight 93, 9/11/01)*

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May 1, 2019

To: Governor's Office and Wyoming Sage Grouse Implementation Team  
Via email: wgfd.hpp@wyo.gov

From: Wyoming Conservation Exchange  
Eric Peterson, Administrator

RE: Comments Regarding potential revisions to:  
Sage-Grouse Executive Order 2015-04  
Governor Mead's Revised Compensatory Mitigation Framework  
Executive Order 2018-03 Compensatory Mitigation Credit Provider Approval Process

The Wyoming Conservation Exchange is very appreciative of the opportunity to provide comment and perspective on the key documents comprising Wyoming's Sage Grouse Conservation Strategy. The Exchange has been very involved in the State's effort to implement process and procedure which would enable the creation and use of conservation credits as mitigating offsets to unavoidable impacts allowed by policy described in EO 2015-04 (Executive Order). Attachment H of the Executive Order provides for Compensatory Mitigation. Efforts to implement Compensatory Mitigation has led to the Compensatory Mitigation Framework, and more recently EO 2018-03.

An early proponent of conservation credits serving as compensatory mitigation offsets, the Conservation Exchange has worked toward creating a system of defining, measuring, trading, and tracking conservation credits. There are several key elements that we believe should be embodied in improvements to the existing Conservation Strategy:

- Employ science-driven metrics to quantify ecological value of conservation credits.  
Existing credit quantification is generally limited to binary choices. Is the habitat suitable? Yes or no. Is the habitat occupied? Yes or no. This simplified decision tree precludes a compensatory mitigation system from acknowledging and rewarding gradations of ecological value as well as the outcome of management efforts to improve habitat or to restore habitat to a functional state. We believe it important to link credit quantification to a more robust vegetation-based habitat quality assessment which can detect and quantify incremental improvement of habitat quality.
- Provide an avenue for rewarding measured habitat lift or successful habitat improvement.  
An outcome of implementing an ecological value-based credit quantification strategy is the ability to incentivize landowner efforts to improve habitat. To realize the potential of incentivizing conservation, a landowner must be able to capitalize on credits earned as a result of management induced habitat lift by going through a process intended to fairly assess additional credits created by that management.
- Provide ability to employ term-limited conservation credits.  
The last decade has witnessed an active conservation easement market. It is fair to suggest perpetual conservation easements have been considered by the bulk of landowners. The primary reason the majority of family ranch owners fail to pursue a conservation easement is the issue of perpetuity and making transgenerational decisions. Term easements provide an option to those landowners who have rejected perpetual easements, and expands and enhances the pool of potential high-quality habitat credits and credit suppliers.
- Enable participation of family ranches, particularly those in proximity of impacted bird populations.

Constructing a system providing for term-limited credits relieves a family ranch from the burden of making transgenerational decisions. The deterrent effect of this barrier cannot be overstated. By providing an option to the barrier, a broader group of ranch lands may be attracted to enroll for more attractive and reasonable terms.

- Encourage application of conservation credits generated from lands in relatively close proximity to impact.  
 A broader selection of willing landowners provides improved ability to place conservation in closer proximity to impact. Offsets placed in proximity to impact are an often stated desire of both industry and the science community.
- Provide incentive for timely rehabilitation of impacted lands by those required to purchase offsets.  
 A fundamental principal of compensatory mitigation is that the offset should be in place for the duration of the impact. A system designed around perpetual or 50-year term credits for a 20-year impact does not encourage timely rehabilitation. Term credits would accomplish that objective. Knowing that a credit will expire and that additional new credits would need secured to maintain the offset, a proponent obligated to provide offset is incentivized to be sure that impact rehabilitation and restoration efforts are timely and successful.
- Relieve landowners of the sole responsibility for Act of God destruction of habitat.  
 For a family ranch, the issue of responsibility for “Act of God” destruction of a conservation credit is a deterrent secondary only to the barrier of making transgenerational decisions. We hope that this problem might be contemplated during the construction of conservation credit policy. Depending upon time, significant value from the credit may have been realized, so one-for one replacement isn’t equitable. Perhaps the State can take a role in relieving a landowner of the responsibility for losses from natural forces beyond the control of management? It is difficult to argue that a landowner, managing well and in good faith, might be doubly jeopardized (productivity loss and credit loss) for unavoidable natural destruction of habitat. If a destructive natural act occurs, the habitat is impaired or lost, whether it is associated with a credit or not.

In sum, the Exchange believes Wyoming can increase the benefits to sage grouse populations from a revised system that removes barriers for family ranches, encourages credits in closer proximity to impacted birds, and employs term limited credits quantified through robust habitat quality metrics and designed to acknowledge and reward habitat quality improvements.

As an assist to those working toward improving the Conservation Strategy, we have prepared the following document, **“Keys to Policy Governing Application of Term Conservation Credits of Compensatory Mitigation Offsets”**. Our submission is designed to enumerate elements of a workable Conservation Credit system and provide a construct for policy and procedure which would provide a pathway for the Wyoming Conservation Exchange to accomplish these goals.

# Keys to Policy Governing Application of Term Conservation Credits of Compensatory Mitigation Offsets

## Credit Properties

There are a number of important properties of any credit, perpetual or term, which have been described in various documents dating as far back as FWS Conservation Banking guidance. Many of those guidance documents have been replaced, but the following key properties have generally been carried forward and acknowledged today. In almost all respects, there is little difference between a term-limited credit and a perpetual term credit. These properties include:

- A credit's term must be durable and must meet or exceed the term of the debit duration.
- A credit may emerge from:
  - Enhancement of Habitat
  - Preservation of Habitat
- A credit is documented through a rigorous scientific assessment of habitat condition and value to the species.
  - Encumbers currently occupied habitat
  - Stiver-based (4 order landscape)
  - Vegetation site assessments keyed to ecological site potential and condition
- A credit seller is obligated to provide assurances that the compensatory mitigation offset is maintained over the life of the credit.
  - Assurances guaranteeing credit's life and condition (strategies may include credit or financial reserve or escrow account, collateral, insurance, bonding, etc.)
  - Assurances providing continued monitoring of habitat condition upon which the credit originated, generally in the form of an earmarked escrow account.
  - Assurances providing management certainty and continuity via Landowner Management Contracts
  - Assurance of third-party oversight – an administrator contracted to oversee contract provisions.
  - Appropriate encumbrances to the land for the duration of credit term
- A credit's use is generally restricted to some Service area or proximity to impact.
- The land generating a credit's ownership is documented
- The land's historical and planned management is documented
- Development risk is documented and considered. Risk may invalidate eligibility.
- The credit's durability is planned and insured via one or more strategies:
  - Contract and Management Plan
  - Site Protection Instruments
  - Financial Assurances
  - Reserve Account
- A credit must provide additionality by providing something more (in this case habitat value) than is already obligated.

The essential difference between perpetual and term credits is the length of time the credit is intended to provide habitat protection and therefore different protection instruments would be employed. Perpetual

credits may be encumbered by traditional (more or less) conservation easements. Term credits would employ long term contracts including management contracts, deed restrictions encumbering land and mineral, and financial instruments assuring stewardship of the credit. These differences provide additional distinction between the stewardship of Perpetual and Term credits.

- Perpetual:
  - Intended to be forever
  - Perpetual easements implement long term assurances restricting development of the land. Those assurances can provide no guarantee to maintenance of habitat quality.
  - Requires initial habitat standards
  - Eligibility for special IRS tax treatment
- Term:
  - In effect for a limited period
  - Provides protection from land and mineral development
  - Describes/Prescribes land and habitat management intended to preserve or enhance habitat quality
  - Habitat quality standard is required and monitored
  - Quality metrics in place to acknowledge differentials in habitat quality and to detect incremental changes in quality.

## **Description of a term credit application**

Creating and owning a credit is something that a landowner must actively pursue. It is a voluntary enterprise on the part of the landowner who must complete a documentation and review process before a credit offering is acknowledged to generate marketable credits. Documentation is submitted and reviewed for approval or negotiation by those institutions responsible for compensatory mitigation oversight.

Documentation will likely include:

- Project Description
  - Area
  - Legal ownerships
  - Risk Assessment (Mineral, natural hazards, etc.)
- Credit Quantification reports
  - Approved Sampling Design
  - Biological Assessment (species population and use pattern)
  - Data
    - Ecological sites
    - Vegetation data
  - Credit calculation method and result
  - Review/approval of result
- Draft Management Agreement/Contract
  - Legal bounds
  - Legal ownership (surface and mineral)
  - Binding Contract Obligations/Encumbrances
  - Assurances to be provided
  - Proposed Credit administration agreement or plan which will implement third party credit administration responsibilities, to include:

- Assignment of administrative authority and power to enforce contract provisions in agreements and contracts.
- Annual certification of landowner compliance with management plan
- Periodic assessment and verification of ecological state of the project area.
- Trustee of the reserve account (an assurance against failed credits) and appropriate financial escrow accounts
- Maintaining the credit registry - which records the transaction offset between debit and credit.
- Proposed land management plan to include planned uses, anticipated commitments, and proposed contract obligations
- Financial Assurance/Risk Protection Plan
- Deed restrictions, existing or proposed

## **Application Processing**

Credit applications would be submitted to appropriate authority (CMOG, SGIT, Other) for review and certification of credit eligibility and volume, subject to the landowner offerings in the application.

Credit applications may be constructed and reserved to a particular offset, or a landowner may seek approval of credits without reserve, to be privately held and offered to the marketplace. In such case, a proposed private transaction would continue to require certification of offset by the appropriate institution(s).

## **Executing a Compensatory Mitigation Offset**

Upon sale, legal instruments designed to implement the elements of the offset would be executed. It is expected that these activities will be completed contemporaneous to the sale or on an expedited schedule following the sale.

- Credit Provider will:
  - Agree to obligating the subject land for the term of the credit.
  - Sign application's proposed management agreements
  - Create and fund appropriate financial structures
  - Create appropriate encumbrances on the land
- Credit Purchaser will
  - Execute agreements with regulatory authority(ies) binding purchaser to certain reclamation performance standards with prescription for appropriate actions in event of failure to perform
  - Fund and/or purchase instruments prescribed by regulatory authority(ies) assuring the capability of achieving performance standards.
- Credit Administrator will:
  - Sign proposed management agreements and/or appropriate contracts
  - Sign agreements obligating Administrator and Credit Provider to credit monitoring, stewardship, and reporting.
  - Hold, as appropriate, encumbrances and financial structures created for durability and maintenance of the credit
  - Record retirement of the subject credits and associated offset

- Regulatory Authority(ies) will:
    - Review and acknowledge purchase of offset
    - Notice purchaser regarding completion of required mitigation offset
- 

### **Benefits of Term Credits:**

- Term credits provide viable opportunities for a variety of landowners otherwise unable or not inclined to obligate lands for generations.
- Conservation offsets generated by term credits may be obligated in closer proximity to impacted populations.
- Purchasers of term credits are incentivized to be particularly cognizant of reclamation obligations when faced with expiration of their mitigation offset.
- Purchasers of credits are provided ability to custom-fit mitigation strategies affording economy and efficiency in targeting benefit to impacted populations.
- Availability of a term credit option will reduce industry requests for dynamic application of perpetual credits.
- Term credit projects provide an avenue for landowners to finance habitat enhancement as a real financial enterprise, thus suggesting habitat quality lift can result from compensatory mitigation. (This would require the implementation of a vegetation-based habitat quality and credit assignment process.)



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## WCCA Comments on GSG EO

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**Bailey Schreiber** <bschreiber@wyo-wcca.org>  
To: "wgfd.hpp@wyo.gov" <wgfd.hpp@wyo.gov>

Wed, May 1, 2019 at 4:56 PM

Hello,

Please find attached the Wyoming County Commissioners Association's comments regarding suggested updates to the State of Wyoming Greater Sage-Grouse Core Area Protection Strategy (Executive Order 2015-4). If you have any questions, please let me know.

Best,

Bailey

**Bailey K. Schreiber** | Natural Resources Counsel | **Wyoming County Commissioners Association**

408 West 23<sup>rd</sup> Street | Cheyenne, WY 82001

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**WCCA Comment - Wyoming GSG Executive Order.pdf**  
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# Wyoming County Commissioners Association

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May 1, 2019

Wyoming Game and Fish Department  
ATTN: SGIT Chairman Bob Budd  
5400 Bishop Blvd.  
Cheyenne, WY 82006  
Email: [wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

RE: Suggested Updates to the State of Wyoming Greater Sage-Grouse Core Area Protection Strategy  
(Executive Order 2015-4)

Dear Governor Gordon,

Thank you for the opportunity to recommend updates to the State of Wyoming Greater Sage-Grouse Core Area Protection Strategy – Executive Order 2015-4 (the “Executive Order”). The Wyoming County Commissioners Association (“WCCA”), as the body representing all twenty-three boards of county commissioners in Wyoming, understands the value of protecting the Greater sage-grouse while also providing opportunities for energy development and transmission, ranching and farming, recreation and other activities that support the health, safety and general welfare of our constituents.

The Executive Order, and the process by which it was developed, advances these objectives. It has served to guide the management of Greater sage-grouse and its habitat in Wyoming and, along with federal regulatory measures, was the basis for the U.S. Fish and Wildlife Service’s determination that the Greater sage-grouse did not warrant a listing under the Endangered Species Act.<sup>1</sup>

However, years of Executive Order implementation, new scientific information and recent regulatory changes require an update to the Executive Order. Moreover, with a new governor at the head of Wyoming’s executive branch, WCCA would like to express its support for continuing a legacy of balanced Greater sage-grouse management. Please consider the following suggestions to that end.

**I. Limit updates to the Executive Order to clarifications regarding new science, information and regulatory measures.**

Considering recent federal regulatory efforts to amend land and resource management plans to be consistent with the Executive Order, updates to the Executive Order should be limited to clarifications regarding new science, data and regulatory measures. On March 15, 2019, the Bureau of Land Management (BLM) issued final Wyoming Greater Sage-Grouse Approved Resource Management Plan Amendment and Record of Decision, which relies on the Executive Order in its current state. Similarly, the U.S. Forest Service’s (USFS) updates to its Greater sage-grouse land use plans are expected soon and, based on the draft plans, will also rely heavily on the Executive Order. To avoid the need for yet

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<sup>1</sup> 80 Fed. Reg. 59857, 59882 (October 2, 2015).



another amendment to the BLM's and USFS's new plans, the Executive Order should not be substantially altered.

The Executive Order recognizes that "science, information, and data continue to emerge regarding the habitats and behaviors of the Greater sage-grouse" and provides a process by which emerging science can be evaluated and incorporated into management.<sup>2</sup> WCCA asks that you rely on that process and the Sage-Grouse Implementation Team to update the Executive Order and incorporate new science, information and data on Greater sage-grouse, where appropriate.

## **II. Consolidate existing executive orders on Greater sage-grouse into a single document.**

A revised Executive Order should consolidate existing executive policies on Greater sage-grouse management. In the years following the Executive Order's issuance, Governor Matt Mead issued Executive Order 2017-2, Supplement to Greater Sage-Grouse Suitable Habitat Definitions, and Executive Order 2018-03, Compensatory Mitigation Credit Provider Approval Process (the "Compensatory Mitigation EO"). Additionally, the Wyoming Game and Fish Department has issued guidance documents that rely on this executive direction. WCCA suggests that these policies and guidance be consolidated into a single reference manual or handbook for the sake of clarity and convenience.

## **III. Retain Attachment C on Exempt ("de minimis") Activities in its current form.**

WCCA asks that Attachment C of the Executive Order, regarding de minimis activities, be retained in full. Attachment C of the Executive Order contains exemptions from the Executive Order's requirements that have limited impact to Greater sage-grouse populations and are critical for maintaining economic drivers in the state, including ranching, farming and energy development. These exemptions should remain part of the Executive Order.

## **IV. The Executive Order should better define winter concentration areas.**

The Executive Order's definition of "winter concentration areas" is ambiguous. Winter concentration areas are defined as "places where large numbers of Core Population Area Greater sage-grouse congregate and persistently occupy between December 1 and March 14."<sup>3</sup> The Executive Order goes on to say that identification of these areas "should be based on habitat features and repeated observations of winter use by biologically significant numbers of Greater sage-grouse (e.g., groups of ≥50 Greater sage-grouse) using a validated Resource Selection Function (RSF) modeling approach."<sup>4</sup> WCCA suggests that the Executive Order be revised to combine and clarify this existing definition. Moreover, the Executive Order's current reliance on the 50-bird threshold may be too broad and could result in the unintended regulation of lands. The Executive Order should more clearly define what constitutes a

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<sup>2</sup> Executive Order at 3.

<sup>3</sup> *Id.*, Attachment A at 5.

<sup>4</sup> *Id.*



winter concentration area and base this determination on the best available science and practical implications, to the extent it exists.

**V. Update the Executive Order to include an adaptive management strategy.**

The Executive Order should include the process of adaptive management used by the permitting agencies, along with the events that trigger adaptive management. As the Executive Order is currently written, the process for adaptive management is general and brief.<sup>5</sup> WCCA understands that the State has established and uses a more detailed adaptive management strategy and has refined this strategy over time. WCCA asks that the Executive Order be revised to either include the adaptive management strategy itself or include it by reference and make it publicly available.

**VI. The case-by-case Seasonal Use provision for non-Core Population Areas should be expanded to Core Population Areas.**

The Executive Order provides flexibility for seasonable use in non-Core Population Areas: “Activities in unsuitable habitat may also be approved year-round on a case-by-case basis. Activities may be allowed during seasonal closure periods as determined on a case-by-case basis.”<sup>6</sup> To allow for site-specific management, WCCA asks that this flexibility be implemented for Core Population Areas as well.

**VII. Define key descriptors of leks, including occupied, unoccupied, abandoned and active.**

Many of the stipulations provided in the Executive Order rely on leks in various conditions—occupied, unoccupied, abandoned, and active. For example, in Core Population Areas, surface occupancy is not permitted within 0.6 miles of an occupied Greater sage-grouse lek.<sup>7</sup> However, the Executive Order does not define these terms and should be updated to include them.

**VIII. Compensatory mitigation**

The Executive Order should be amended to clarify both the application process and the mechanism for compensatory mitigation in one document. Now, the process is provided in the Compensatory Mitigation EO, which in turn relies on another document: The State of Wyoming Revised Greater Sage-Grouse – Compensatory Mitigation Framework (the “Mitigation Framework”). WCCA suggest that the Executive Order be amended to include the Compensatory Mitigation EO and the Mitigation Framework in a single, clear document.

Moreover, WCCA understands that the Wyoming Joint Minerals, Business and Economic Development Interim Committee intends to further study Greater sage-grouse compensatory mitigation. WCCA supports and will participate in this effort.

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<sup>5</sup> *Id.*, Attachment B at 10.

<sup>6</sup> *Id.*, Attachment B at 6.

<sup>7</sup> *Id.*, Attachment B at 6.



# Wyoming County Commissioners Association

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P.O. Box 86 • 408 W 23rd Street • Cheyenne, WY • 82003  
(307) 632-5409 • [www.wyo-wcca.org](http://www.wyo-wcca.org)

WCCA appreciates the opportunity to provide these comments. Please do not hesitate to reach out if you have any questions.

Sincerely,

Troy Thompson  
President, WCCA  
Laramie County Commissioner



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## WDA Comments - Executive Order Updates 2019

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**Michelle MacDonald** <michelle.macdonald@wyo.gov>

Wed, May 1, 2019 at 3:01 PM

To: Beth Callaway &lt;beth.callaway@wyo.gov&gt;, wgfd.hpp@wyo.gov

Cc: Joe Budd &lt;joe.budd@wyo.gov&gt;

Please see the attached comment letter regarding the Executive Order Updates for 2019.

Thanks!

Michelle MacDonald  
Natural Resources & Policy Division  
WY Department of Agriculture  
[2219 Carey Ave.](#)  
[Cheyenne, WY 82002-0100](#)  
(307) 777-7323  
Fax: (307) 777-6593

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**5-1-19EO Update 2019.pdf**

143K



*Wyoming*  
DEPARTMENT OF *Agriculture*

Mark Gordon, *Governor*  
Doug Miyamoto, *Director*  
2219 Carey Ave. • Cheyenne, WY 82002  
Phone: (307) 777-7321 • Fax: (307) 777-6593  
Web: agriculture.wy.gov • Email: wda1@wyo.gov

*The Wyoming Department of Agriculture is dedicated to the promotion and enhancement of Wyoming's agriculture, natural resources and quality of life.*

May 1, 2019

Governor Mark Gordon  
Idelman Mansion  
2323 Carey Avenue  
Cheyenne, WY 82002

Governor Gordon,

Following are the Wyoming Department of Agriculture (WDA) comments regarding your request for input on revisions/updates to the Greater Sage-grouse Core Area Protection Executive Order 2015-4 (EO 2015-4). Our comments are also specific to our mission: dedication to the promotion and enhancement of Wyoming's agriculture, natural resources, and quality of life. Changes to the EO 2015-4 could affect our industry, citizens, and natural resources in multiple ways that are not always immediately noticeable.

Per instructions at the February Sage Grouse Implementation Team (SGIT) meeting, we have limited our comments to large changes and have not provided specific linguistic changes to the EO. For this exercise, we have worked only from EO 2015-4 and have not considered the substance of EOs 2017-2 and 2018-3 or the Compensatory Mitigation Framework (Framework) to be part of this request for input. We discuss incorporation of these other EOs and the Framework but have not provided input on their substance. However, we feel Governor Gordon could consolidate all Executive Orders into a single EO. This would include EO 2015-4, EO 2017-2, EO 2018-3 and the Framework. EO 2015-4 has a placeholder for the Framework already built in (EO Attachment H) and EO 2018-3 may also fit well here; EO 2017-2 is a clarification and addition to existing direction in EO 2015-4 (see EO Attachment F) and could likely be easily incorporated. We would also suggest the Governor consider ways in which existing Memoranda of Understanding between the state and federal agencies regarding sage-grouse management and processes may be incorporated into the EO, if appropriate.

Specific comments on EO 2015-4 are included below in order of appearance:

1. "WHEREAS" Section

- a. We feel this section could be significantly shorter. When the EO was revised in 2015 the SGIT spent a significant amount of time developing these items in order to properly relay the history of management in Wyoming to the United States Fish and Wildlife Service (USFWS) before the listing decision.<sup>1</sup> However, given changes to federal plans and the listing decision, we do not feel this level of detail is still needed.

<sup>1</sup> Federal Register Vol. 80, No. 191, 50 CFR Part 17. Endangered and Threatened Wildlife and Plants; 12-Month Finding on Petition to List Greater Sage-Grouse (*Centrocercus urophasianus*) as an Endangered or Threatened Species (2015)

*Equal Opportunity in Employment and Services*

**BOARD MEMBERS**

Jana Ginter, *District 1* • James Rogers, *District 2* • Shaun Sims, *District 3* • Amanda Hulet, *District 4* • Mike Riley, *District 5*  
Bryan Brost, *District 6* • Kevin Schieffer, *District 7*

**YOUTH BOARD MEMBERS**

Kendall Roberts, *Southeast* • Jared Boardman, *Northwest* • John Hansen, *Southwest* • Cameron Smith, *Northeast*

- THEREFORE regarding proactive approaches to managing wild horse populations above AML in Wyoming HMAs. Language currently exists within the Wyoming BLM sage-grouse plans that may provide potential guidance and further consistency between State and Federal plans.

3. Attachment A

- a. No suggested changes

4. Attachment B

- a. This attachment's title has proven confusing in the past for some. We would suggest the Governor consider changing the title to more clearly describe the intent of this attachment and/or re-structure the attachment. It should be very clear to anyone reading this section that it does not apply to all activities or uses in Core.
- b. We suggest closely reviewing the use of "disruptive" in describing activities and ensure it is being used correctly and consider adding a definition of "disruptive activities".
- c. We believe there needs to be additional discussion on vegetation treatments, including prescribed fire, in Core Areas and a pragmatic approach clearly articulated regarding their use. We feel it may be beneficial to add a section that is specific to the use of prescribed fire to Attachment B and suggest working with Jill Randall from WGFD on a fire-specific section.
- d. Winter Concentration Areas
  - i. We feel there is a need to explicitly state that WCAs do not and will not be delineated within Core Areas. WCAs were developed specifically due to the location of the only one known to exist which is outside of a Core Area. Other discussion on WCAs may be needed as well but we do not believe there is ample information or need to develop additional stipulations for WCAs at this time.
- e. Wind Energy Development in Core
  - i. We would ask that solar power be discussed as well and suggest this section be changed to "Wind and Solar Energy Development in Core". The language within could read: "Wind and solar development are not recommended..."

5. Attachment C

- a. It is extremely important that this section stay in place. We do not suggest any major changes to this Attachment.
- b. We believe it would be beneficial to partially revise de minimis activity #13. Currently this item is limited to maintenance only. We suggest changing this to read "Maintenance or modification of existing fences."
- c. De minimis activity #15 was originally developed prior to the release of federal sage-grouse plans. We believe the processes outlined within this must be retained but may better fit a different Attachment (potentially in Attachment D) or be more appropriate at the beginning of Attachment C. We would be happy to work with the Governor's Office on this item.

6. Attachment D

- a. This may be a good place to include the MOU regarding State and federal coordination on projects.

7. Attachment E

- a. No suggested changes.

8. Attachment F

- a. Definition 2 under "Suitable" – this is likely the best place to include language from EO 2017-2 on riparian areas.

- b. In the event that all the WHEREAS statements are retained, we offer the following suggestions for review:

- i. WHEREAS #6 – sage-grouse as a candidate species; update to reflect October 2, 2015 Finding by USFWS.
- ii. WHEREAS #7 - WY plan(s) designed to conserve sage-grouse
  - We do not dispute the plans are a major factor, if not the major factor, in avoiding a listing. However, the discussion of interaction and plans with regard to the US Fish and Wildlife Service may create some opportunity. Under Section 6 of the Endangered Species Act the USFWS can enter into “cooperative agreements” with a state that “establishes and maintains an adequate and active program for the conservation of endangered and threatened species” (ESA Sec. 6(c)(1)). Clearly Wyoming has demonstrated this commitment over the last 10 plus years. This begs the question, given the current status of sage-grouse, can the Secretary enter into an agreement under Section 6? We encourage the Governor’s Office to look further into potential use of this section of the ESA in order to maintain state primacy, leverage funds, and implement the ESA as Congress originally intended. We also suggest the Governor’s Office review, *Wildlife Issues Are Local- So Why Isn’t ESA Implementation*, Stoellinger (2017)<sup>2</sup> for an in depth discussion of Section 6 of the ESA. State primacy over sage-grouse is also discussed in WHEREAS #5 and #8 and the State’s commitment to establishing and maintaining a plan for sage-grouse is highlighted in WHEREAS #9, #11, #15, #16, #17, #18, #19, #23, #26, #28 and is evidenced further by implementation of the plan as a whole. We would also note that the USFWS has reviewed and acknowledged the State’s plan is sound (see WHEREAS #20, #21, and #22).
- iii. Additional WHEREAS statements to consider include:
  - Include a WHEREAS regarding invasive annual grasses and other noxious weeds that either exist, or may exist, in the State and where control should be emphasized.
  - Include a WHEREAS regarding feral horses and Appropriate Management Levels in Horse Management Areas in Wyoming that may be impacting Core Areas.
  - Consider moving paragraph the second paragraph from de minimis activity #15 (Attachment C) which starts with “It is Wyoming’s primary premise that grazing activities are compatible with Greater sage-grouse conservation...” into a WHEREAS statement.

## 2. “THEREFORE” Section

- a. We would ask the Governor to leave THEREFORE 5 in place. We believe many will ask for new stipulations for things like Winter Concentration Areas but we do not feel there is adequate information, or a need, at this time to develop further stipulations on land uses or activities occurring within Core Areas.
- b. THEREFORE 18 could reference the existing MOU between the State and Federal Agencies regarding implementation of the Compensatory Mitigation Framework.
- c. Additional THEREFORE statements could include:
  - THEREFORE regarding Early Detection Rapid Response to invasive annual grasses and other noxious weeds that have the potential to or are impacting Core Areas.

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<sup>2</sup> Temple Stoellinger, *Wildlife Issues are Local – So Why Isn’t ESA Implementation?*, 44 Ecology L. A. 681 (2017)

- b. Discussion of habitat treatments under "Transitional" definition – this may fit better in Attachment B where vegetation treatments are discussed. We would also suggest the updated EO include a section that directly addresses the use of fire as tool in sagebrush systems. Discussion associated with restoration following fire could also be included in a fire-specific section.
- c. Definition of "Unsuitable" – We agree with the definition and the footnote that states "unsuitable" is defined differently under the Habitat Assessment Framework (HAF; Stiver et al., 2015). The addition of a section regarding the HAF and the EO may be helpful and provide clarity regarding different definitions. Please note: we are not advocating for the use of numerical values associated with HAF definitions of habitat.
- d. Definition of "Disturbed" – We feel part d. of this section should be reviewed. Given the ecological realities in Northeast Wyoming, the likelihood of ever returning sagebrush to some of these areas is low. We recognize that sagebrush re-establishment can occur but it requires significant inputs of time and money and the likelihood of natural re-establishment is extremely low. We suggest working with the Douglas Core Area Restoration Team to further expand this portion of the Disturbed definition to properly reflect conditions and ecological processes in NE Wyoming.

9. Attachment G

- a. No suggested changes, however, we recommend you contact Dr. Peter Stahl with the University of Wyoming to see if he has any updated recommendations for this section.

10. Attachment H

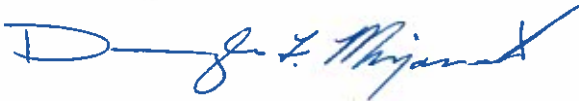
- a. This served as a placeholder for the Framework. We recommend the Framework be combined (along with other EOs) into a new EO.

11. Attachment I

- a. No suggested changes.

We thank you for the opportunity to comment. If you have any questions regarding our comments please reach out to the Natural Resource and Policy Division.

Sincerely,



Doug Miyamoto  
Director

DM/jb

CC: Governor's Policy Office  
Wyoming Board of Agriculture  
Wyoming Association of Conservation Districts  
Wyoming Farm Bureau Federation  
Wyoming County Commissioner's Association

Wyoming Game and Fish Department  
Wyoming State Grazing Board  
Wyoming Stock Growers Association  
Public Lands Council



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Greater Sage-Grouse Core Area Protection Strategy

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**Peter Jenny** <j.peter.jenny@gmail.com>

Tue, Apr 30, 2019 at 7:58 AM

To: wgfd.hpp@wyo.gov

Dear Governor Gordon,

Thank you for this opportunity to provide the attached comment on the Wyoming Greater Sage-Grouse Core Area Protection Strategy (EO 2015-4). We appreciate the State's efforts to maintain and enhance sage-grouse populations and their habitats while allowing opportunities for responsible resource development.

**WFA letter to governor 4-29-2019.docx**

73K



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April 29, 2019

The Honorable Mark Gordon  
Governor of Wyoming  
Idelman Mansion  
2323 Carey Ave.  
Cheyenne, WY 82002-0010

Sent via electronic facsimile to: wgfd.hpp@wyo.gov

From: The Wyoming Falconers' Association

RE: Wyoming Greater Sage-Grouse Executive Order Public Input Request

Dear Governor Gordon,

Thank you for this opportunity to comment on the Wyoming Greater Sage-Grouse Core Area Protection Strategy (EO 2015-4). We appreciate the State's efforts to maintain and enhance sage-grouse populations and their habitats while allowing opportunities for responsible resource development.

Falconers have had a longstanding and well-deserved reputation as responsible sportsmen, conservationists and citizen scientists. Falconers have been charter members of four local Greater Sage-grouse Working Groups since their inception. Even though falconry take represents a tiny fraction of the gun harvest, the Greater Sage-grouse is an important game species for Wyoming falconers. They are the most widespread quarry available to us as falconers and in many areas of the state the only quarry available. Falconers from other states and from around the world visit Wyoming each year to observe the spectacle of hunting this magnificent grouse with trained raptors.

Upon review of the SGEO, the Wyoming Falconers' Association would like to provide the following recommendations for your consideration:

1. New numbered statement requested on page 6 of the Executive Order.

**Control of invasive plant species should be emphasized within and adjacent to Core Population Areas.**

**Comment:** *The pervasive threats posed by invasive plants to wildlife habitat and agricultural production are well-documented and increasing in scope and severity.*

*The spread of invasive plant species in to native habitats alters the water regime, increases fire risk and reduces productivity of plant communities. Once established, invasive plants are typically extremely difficult to eradicate.*

2. New “de minimus” statement requested on page 3 of Attachment C.

**Hunting seasons and bag limits regulated by the WGFD utilizing population data obtained in Wyoming.**

**Comment:** *In the “12-Month Findings for Petitions to List the Greater Sage-Grouse as Threatened or Endangered” the United States Fish and Wildlife Service stated that “We have no evidence suggesting that gun and bow sport hunting has been a primary cause of range-wide declines of the greater sage-grouse in the past, or that it currently is at level that poses a significant threat to the species.” Additionally, later in the findings they stated that, “There have not been any studies demonstrating that hunting is the primary cause of population declines in sage-grouse.”*

*Furthermore, the Wyoming Game and Fish Department has acknowledged that, “Hunting creates a constituency of sage-grouse advocates who are interested in seeing the needs of grouse populations are met and license fees provide revenue for management,” and, “Eliminating hunting would also eliminate an ally in the effort to prevent the need for listing under the Endangered Species Act.” (Christiansen 2008)*

3. Add text to Compensatory Mitigation narrative Appendix H, page 1.

*Compensatory mitigation shall be as close as possible to the habitat disturbance. Sage-grouse exhibit extreme habitat fidelity and are poor pioneers of seasonal ranges. Habitat improvements at distant mitigation sites may never be found or utilized by the local populations impacted by habitat disturbances. Every effort should be made to benefit the actual grouse populations affected by habitat loss.*

Respectfully submitted,

J. Peter Jenny  
President Elect  
Wyoming Falconers’ Association



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## Comments on SG EO

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**Holly Kennedy** <hkennedy@wyfb.org>  
To: "wgfd.hpp@wyo.gov" <wgfd.hpp@wyo.gov>

Wed, May 1, 2019 at 3:19 PM

Please find attached comments submitted on behalf of the members of the Wyoming Farm Bureau Federation.

Best,

*Holly L. M. Kennedy*

**Wyoming Farm Bureau Federation**  
Field Services and Federal Lands Associate

Direct Line: (307) 721-7728

Cell: (307) 761-3545

[hkennedy@wyfb.org](mailto:hkennedy@wyfb.org)

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**WYFB Comments -- 2019 SG EO Review.pdf**

1007K

May 1<sup>st</sup> 2019

submitted electronically to: [wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

Wyoming Game & Fish Department  
5400 Bishop Blvd  
Cheyenne, WY 82206

RE: Wyoming Sage-Grouse Executive Order

To Whom It May Concern,

The Wyoming Farm Bureau Federation is commenting on behalf of over 2,600 agricultural producer members in the state of Wyoming. We appreciate the opportunity to address both overarching and specific items of concern found within this document. We appreciate both the Governor's and the department's attention to Sage-Grouse management within the state.

#### **Overarching Concerns**

Generally, we support the Core Area Strategy (Strategy) and appreciate the Wyoming Sage-Grouse Executive Orders (EO) recognition of agriculture's vital role in maintaining healthy rangelands. We fully support Sage-Grouse being managed at the state level and consider the current Strategy to take a mostly workable approach.

However, predation and predator control are two areas that are lacking from the EO. Not only should the effects of predation be recognized, but strategies for how predators will be controlled and their impact reduced should be clearly laid out within the document.

Throughout the document references are made towards restricting activities on private property. While we feel there is adequate room for incentivization, private property owners should not be asked to carry undue financial burden nor have their rights of ownership obstructed. Additionally, we would ask that a formalized process be established for removal of private property from Core when requested.

#### **Individual Edits**

*EO 2015-4 Page 4 bullet point 5*

Clarification should be added that this only applies to those uses or activities that are subject to State or Federal Agency review or approval.

*EO 2015-4 Attachment B Page 6*

SEASONAL USE: Clarification should be provided as to what ‘activities’ the EO is referencing.

*EO 2015-4 Attachment B Pages 8 and 9*

VEGETATION REMOVAL: Clarification should be added that this only applies to those uses or activities that are subject to State or Federal Agency review or approval.

*EO 2015-4 Attachment C Page 1 bullet point 1*

As “de minimus” activities this should state that construction within .6 miles is *not restricted* instead of *allowed*. Also, it should state that new tanks *should* have escape ramps not *shall*.

*EO 2015-4 Attachment C Page 1 bullet point 7*

Using the following language is misleading and conveys a negative connotation “excluding conversion of sagebrush habitats to agricultural lands”. This could be corrected by instead stating “excluding conversion of sagebrush habitats to tilled cropland. Similarly, the term “ag conversion” should not be used due to its misleading and negative connotation.

*EO 2015-4 Attachment C Page 1 bullet point 8*

Again, as a “de minimus” activity this should state that construction within .6 miles is *not restricted* instead of *allowed*.

*EO 2015-4 Attachment C Page 2 bullet point 9*

Again, as a “de minimus” activity this should state that construction within .6 miles is *not restricted* instead of *allowed*.

*EO 2015-4 Attachment C Page 2 bullet point 10*

Wetlands and irrigated riparian meadows are considered suitable habitat as supported in *EO 2017-2*. Furthermore, the essential benefits that they provide to grouse are widely recognized. It should not be stated or assumed that conversion is always non beneficial. Furthermore, such restrictions should not be implied or applied to private property.

*EO 2015-4 Attachment C Page 2 bullet point 12*

Again, as a “de minimus” activity this should state that construction within .6 miles is *not restricted* instead of *is permitted*.

### In Conclusion

Overall, we believe the EO and Strategy lay out a path forward that ensures that Sage-Grouse remain in State management. However, we would ask that the above edits are incorporated. The EO should clearly state the Governors respect for private property rights. Additionally, we ask that predator management is addressed and that a clear plan is laid out for predator reductions as needed.

Sincerely,



Holly L.M. Kennedy  
Wyoming Farm Bureau Federation  
Field Services & Federal Lands Associate



CC: NER; Board; Governor's Office; WDA; WACD; WWG; WSGA



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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**WMA Comments - Wyoming SGEO.**

---

**Travis Deti** <tdeti@wyomingmining.org>  
To: wgfd.hpp@wyo.gov

Tue, Apr 30, 2019 at 10:15 AM

To whom it may concern:

Attached please find comments of the Wyoming Mining Association regarding the Wyoming Sage Grouse Executive Order.

Best regards,

Travis Deti

Executive Director

Wyoming Mining Association

[1401 Airport Parkway, Suite 230](#)

[Cheyenne, Wyoming 82001](#)

307-635-0331

[tdeti@wyomingmining.org](mailto:tdeti@wyomingmining.org)

[www.wyomingmining.org](http://www.wyomingmining.org)



**190430 WMA Comments\_Wyoming SGEO.pdf**  
183K



1401 Airport Parkway, Ste. 230 - Cheyenne, WY 82001 - (307)-635-0331

April 30, 2019

The Honorable Mark Gordon  
Governor of Wyoming  
Idelman Mansion  
2323 Carey Avenue  
Cheyenne, Wyoming 82002-0010

**RE: Wyoming Mining Association Comments on the Wyoming Sage-Grouse Executive Order**

Dear Governor Gordon:

The Wyoming Mining Association (WMA) is a statewide trade organization that represents and advocates for 26 mining company members producing bentonite, coal, trona and uranium. WMA also represents 120 associate member companies, one railroad, two electricity co-ops, and 200 individual members.

WMA members have been operating across Wyoming with State and Federal agencies on Greater Sage-grouse issues. Many of our members are participants in Candidate Conservation Agreement programs with the U.S. Fish and Wildlife Service. Still others are involved in local working group efforts under the direction of the Wyoming Sage Grouse Implementation Team (SGIT). In these roles the mining industry is integrally involved in efforts to protect and enhance sage-grouse habitat. We are heavily invested in the continuing success of the Wyoming Sage-Grouse Executive Order (SGEO). WMA therefore offers the following comments regarding the SGEO.

The Wyoming SGEO has long been recognized as one of the most important sources of guidance for sage-grouse management in the western United States. It is essential for Wyoming to continue to coordinate with the Federal land management agencies to ensure their policies support the State's SGEO. This will provide the greatest benefit for the sage-grouse and its habitat, will continue the successful balance with resource development in Wyoming, and will help ensure that Wyoming continues to influence the direction of these efforts in the western United States.

The mining sectors in Wyoming operate on all combinations of federal surface, federal mineral, and non-federal surface and mineral. The process for authorizing a mining operation in Wyoming on any of these combinations of federal/non-federal estates is a very rigorous process from collection of baseline data prior to leasing or acquiring rights to mine the mineral; to obtaining licenses and permits for the mining operations; and ultimately to unparalleled requirements for reclamation of the operation and bonding to ensure the reclamation is performed. Elapsed time associated with navigating these processes can be on the order of years to a decade or more. Once a federal (or state) agency has made findings regarding leases, patents or other rights to mine, these decisions need to be treated

[www.wyomingmining.org](http://www.wyomingmining.org)

as valid existing rights. This is one of the few certainties that the State can offer the mining industry once the process has been successfully completed. The SGEO must recognize that the State and Federal processes for acquiring the rights to mine and the permits to mine are rigorous, thorough and designed to require protection, enhancement and reclamation of sage-grouse habitat. We recommend the following language be added to the SGEO:

*“The State of Wyoming has regulatory programs designed to require that all mining in Wyoming is conducted in a manner which will result in protection of the greater sage-grouse and its habitat and reclamation to a productive postmining condition or land use that includes wildlife habitat. These programs provide performance requirements and consultation opportunities with State and Federal land managers to ensure regulatory certainty to the State and Federal governments and the mining industry.”*

Recently, compensatory mitigation requirements have been added to the SGEO. One dilemma associated with these requirements is that there is only one source of credits within the State. As noted in the comments from several WMA members this can pose a problem with different ramifications to the various mining sectors. The problems can vary with proximity to core areas as well as proximity to the credit source. In some cases, the compensatory mitigation requirement does not support the underlying goal of completing mitigation where disturbance is occurring. A one-size-fits-all solution is not appropriate for Wyoming. WMA is committed to working with the Wyoming Game and Fish Department to develop options that help to achieve the overall goal of encouraging mitigation, conservation or reclamation in the vicinity of the disturbance. The real benefit to this approach is that recovery efforts for sage-grouse will occur state-wide and not only where habitat banking options are available.

WMA also recommend that certain language in the section on Mining may not be compatible with the statutory and regulatory requirements of the mining regulatory programs in Wyoming. For example, use of the term “permit” has specific statutory meaning within the regulatory program, but the SGEO is based upon mine plan areas which are not defined in the regulatory programs. WMA suggests recommends working sessions with the Wyoming Game and Fish Department to resolve such discrepancies.

The SGEO should be revised with language to clarify how compensatory mitigation will or will not be applied to areas where voluntary conservation agreements have been initiated. Voluntary agreements with U.S. Fish and Wildlife Service such as Candidate Conservation Agreements with Assurances and Candidate Conservation Agreements need to be recognized in the SGEO. These conservation efforts need to be valued above compensatory mitigation in order to provide incentive to use this type of tool instead of defaulting to the choice of last resort: compensatory mitigation.

Clarification is also needed to address debit obligations for disturbances inside Core and Non-Core areas in the SGEO Table and in Attachment H (Compensatory Mitigation). A debit obligation for disturbance in Core versus Non-Core Areas should not be the same. In fact, debit obligations in Non-Core must be less to properly support the larger Core Area Strategy to “incentivize development activities outside of Core areas” as is written in the SGEO objective below.

“To ensure continued sustainability of Wyoming’s economy, all efforts to encourage, enhance, and prioritize development outside of Core Population Areas shall be made. State and federal agencies, with other relevant stakeholders, should work collaboratively to develop strategic plan to achieve a beneficial balance between Greater sage-grouse protection and Wyoming’s economy. Incentives, prioritization of projects outside of Core Population Areas, and streamlining permit process should be considered.”

Wyoming Mining Association members have submitted individual comment letters in response to this information request. The comments reflect differences among the various mining sectors, differences due to climatic and habitat conditions across Wyoming, and differences in proximity to suitable sage-grouse habitat. Wyoming will be best served by a program which balances responsible development with the regulatory programs and is sensitive to the myriad landscapes that support sage-grouse. WMA supports these individual letters and is committed to working with SGIT, the Wyoming Game and Fish Department to develop language which helps to achieve the continuation of a strong State-level program through this Executive Order.

Thank you for your kind attention and the opportunity to comment. Please don’t hesitate to contact us should you have questions or concerns, or if we can assist your staff in any way.

Best regards,



Travis Deti  
Executive Director



WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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**WY SGEO Comments (Audubon and WY Outdoor Council) - attached**

---

**Edmunds, Daly** <dedmunds@audubon.org>

Tue, Apr 30, 2019 at 2:41 PM

To: "wgfd.hpp@wyo.gov" &lt;wgfd.hpp@wyo.gov&gt;

Cc: "brian.nesvik@wyo.gov" &lt;brian.nesvik@wyo.gov&gt;, "Rutledge, Brian" &lt;brutledge@audubon.org&gt;, "dan@wyomingoutdoorcouncil.org" &lt;dan@wyomingoutdoorcouncil.org&gt;, "Holloran, Alison" &lt;aholloran@audubon.org&gt;

Dear Director Nesvik:

Attached are comments submitted on behalf of the National Audubon Society and Wyoming Outdoor Council. Our organizations have a long history of productive engagement in Wyoming conservation issues and appreciate the opportunity to contribute to Governor Gordon's review of the 2015-4 Sage-Grouse Executive Order (SGEO 2015-4).

We look forward to continuing to work with you to ensure the long-term conservation of the Greater sage-grouse and the habitat that sustains this iconic species. If adopted, we believe the specific revisions to the SGEO recommended herein will significantly strengthen the state's sage-grouse conservation effort while maintaining the flexibility and common-sense approach embodied in the existing EO.

Respectfully,

Audubon and Wyoming Outdoor Council

—

**Daly Edmunds**

Policy and Outreach Director

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1850K



April 30, 2019

Brian Nesvik, Director  
Wyoming Game and Fish Department  
5400 Bishop Boulevard  
Cheyenne, WY 82006  
[wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

***Re: Comments on 2015-4 Sage-Grouse Executive Order***

Dear Director Nesvik:

The following comments are submitted on behalf of the National Audubon Society and Wyoming Outdoor Council. Our organizations have a long history of productive engagement in Wyoming conservation issues and appreciate the opportunity to contribute to Governor Gordon's review of the 2015-4 Sage-Grouse Executive Order (SGEO 2015-4).

The National Audubon Society's mission is to protect birds and the places they need, today and tomorrow. Audubon Rockies is a regional office of National Audubon Society and has been an active member of the Wyoming Governor's Sage-Grouse Implementation Team since its inception in 2007, contributing science/policy input and engaging with the wide range of stakeholders that are invested in the conservation outcomes related to Greater sage-grouse.

Founded in 1967, the Wyoming Outdoor Council is the state's oldest and largest independent conservation organization. The organization's mission is to protect Wyoming's environment and quality of life for present and future generations. Wyoming Outdoor Council has engaged in numerous state and federal sage-grouse policy issues, recognizing the broader value to the ecosystem and our western communities.

The elimination of several key conservation measures in the Bureau of Land Management's recently amended land use plans have placed additional management responsibilities on the State of Wyoming. The erosion of regulatory certainty previously provided by the BLM's 2015 Greater sage-grouse plan amendments, along with other significant administrative changes, raises concern over the efficacy of the newly amended BLM land use plans and place us at a critical juncture in determining the long-term future for this iconic species. Although deeply troubled by the changes at the federal level, we are encouraged by the State's continued commitment to proactively manage sage-grouse and appreciate the broader benefits that thoughtful management of the sagebrush habitat has for the myriad of wildlife, including other species that are also experiencing declines. The actions taken by Wyoming will continue to set an example for management across the species' range, and we hope these actions will sufficiently eliminate any need for protection of the Greater sage-grouse under the Endangered Species Act.

Attached are our detailed comments on both the body and attachments of SGEO 2015-4, utilizing track changes to ensure understanding of our suggestions. We respectfully note that these comments incorporate concepts not only from our years of experience on this issue but also built from in-depth conversations with external sage-grouse experts.

Our comments focus on the following main concepts:

- 1) **Prioritization** – Given the documented importance of Core Populations Areas to Greater sage-grouse and the challenges of restoring degraded habitat, sustained and even enhanced efforts to shift development away from the most important and productive sage-grouse habitat must be taken.
  - To ensure continued sustainability of Wyoming's economy and way of life, all efforts to encourage, enhance, and prioritize development outside of Core Population Areas should continue to be made, while noting that development in non-core habitats must account for connectivity among Core Population Areas as described below. We recommend that the State re-emphasize its commitment to safeguarding core area habitats by maintaining and strengthening development prioritization standards irrespective of Federal efforts to undermine those standards through changes in their leasing and development priorities.
- 2) **Carrying Capacity** - The State must expand carrying capacity to achieve “lift” in sage grouse populations.
  - Within the Greater sage-grouse habitat preservation framework established by the SGEO, increasing carrying capacity of existing habitats is the primary means by which the State can sustain population numbers. We recommend that the state focus on developing a strategic plan for reintroduction of appropriate plants and systematically encourage enhanced vegetal cover in order to increase carrying capacity of sagebrush habitats throughout the state. This will better insure the maintenance and potential expansion of existing Greater sage-grouse populations, and is critical for attaining the long-term goals laid out in the SGEO.
- 3) **Connectivity Among Core Population Areas** - Protecting habitat between Core Population Areas is essential to maintain strong and resilient populations of Greater sage-grouse.
  - Movement of genetic material among populations of Greater sage-grouse reduces the threat of isolating populations and this is critical for sustaining populations in core areas in Wyoming. The movement of genetic material requires the movement of individual sage-grouse among populations throughout Wyoming and between core areas and priority sage-grouse management areas in adjacent states, and these movements in general need to occur through non-core habitats and already identified connectivity corridors. We recommend that the State manage non-core habitats similarly to connectivity corridors and in such a way that sustains natural immigration/emigration of individual sage-grouse among core areas throughout the State and into neighboring states.
- 4) **Ensuring Functionality of Core Population Areas** – The State must place more emphasis on timely reclamation and restoration of sage-grouse habitats and expand efforts to control invasive species.
  - The sooner a disturbed area can return to functioning native habitat, the more likely the ability to maintain both sagebrush habitat and grouse populations. Incentives to accelerate or enhance required reclamation in habitats adjacent to or within Core Population Areas should be developed, including but not limited to stipulation waivers, funding for enhanced reclamation, cost-share partnerships, approaches to mitigation, and other strategies. Increasing carrying capacity should be an integral focus of broader restoration approaches.
  - Threats posed by invasive plants to wildlife habitat and agricultural production are well-documented and increasing in scope and severity. Control of invasive plant species should be prioritized throughout sagebrush habitats, especially within and adjacent to Core Population Areas. Working with the University of Wyoming, we recommend that State agencies develop and implement a state-level invasive plant management plan that builds from ecologically-sound and innovative approaches developed in other portions of the sage-grouse range.
- 5) **Mitigation** – Effective mitigation is a necessity, and must include actions that help build lift in populations; existing programs do not prevent the continued loss of core area habitat.

- The State should build and maintain a scientifically and legally defensible mitigation program, which should follow the mitigation hierarchy to avoid, minimize and compensate for impacts.
  - Compensatory mitigation standards must ensure mitigation efforts fully offset direct and indirect residual impacts to sage-grouse habitat function and value. This in general requires that projects undertaken as mitigation have a focus on enhancement (lift) in addition to preservation. We recommend that the State further develops their mitigation framework to incentivize lift within the context of the preservation approaches already developed, and that the program is designed to maximize participation to ensure mitigation is undertaken in such a way that the distribution of sage-grouse as well as population numbers are maintained throughout the State.
- 6) **Data collection & reporting** - Data collection and reporting efforts must be strengthened.
- The State must be dedicated to the transparent management of Greater sage-grouse and sagebrush habitats, including the regular annual reporting of the effectiveness of the Core Area Protection strategy by Core Population Area and statewide, and coordination, collaboration, and data sharing with inter-agency monitoring and analyses efforts in Wyoming and across the range of the species. This should include the summarization and dissemination of non-proprietary data to other state-level as well as range-wide-level programs.
- 7) **Cross-jurisdictional coordination** - The State should seek additional opportunities to enhance coordination and cooperation across all jurisdictions.
- Effective management of Greater sage-grouse in Wyoming requires that the State actively working across jurisdictional boundaries to include direct and consistent engagement and coordination with management agencies in neighboring states. We recommend that Wyoming strengthens its working relationship with those responsible for the management of sage-grouse in all States with populations of the species to ensure Wyoming's strategy is maintained as an integral component of management of sage-grouse across the range of the species.

We look forward to continuing to work with you to ensure the long-term conservation of the Greater sage-grouse and the habitat that sustains this iconic species. If adopted, we believe the specific revisions to the SGEO recommended herein will significantly strengthen the state's sage-grouse conservation effort while maintaining the flexibility and common-sense approach embodied in the existing EO.

Respectfully,



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Enclosure



## Office of the Governor

### STATE OF WYOMING EXECUTIVE DEPARTMENT EXECUTIVE ORDER

**SUGGESTED CHANGES TO Order 2015-4**  
(Replaces 2011-5 and 2013-3)

#### **GREATER SAGE-GROUSE CORE AREA PROTECTION**

**WHEREAS**, the State of Wyoming is proud of its rich wildlife heritage and is one of few states remaining in the United States where wildlife exist in great abundance; and

**WHEREAS**, the Greater sage-grouse (*Centrocercus urophasianus*), an iconic western species, inhabits much of the sagebrush-steppe habitat in Wyoming; and

**WHEREAS**, the sagebrush-steppe habitat type is abundant across the State of Wyoming; and

**WHEREAS**, the State of Wyoming currently has the greatest population of Greater sage-grouse (35-40%) across the range; and

**WHEREAS**, the State of Wyoming has management authority over Greater sage-grouse populations in Wyoming; and

~~**WHEREAS**, the United States Department of the Interior has determined that listing the Greater sage-grouse range-wide as a threatened or endangered species is currently precluded making it a candidate species; and~~

Commented [ED1]: No longer valid

**WHEREAS**, in response to the U.S. Fish and Wildlife Service finding under Listing Factor D, the State of Wyoming and partner federal, state and local agencies have developed and put into place a comprehensive and effective set of regulatory mechanisms designed to conserve the Greater sage-grouse; and

**WHEREAS**, it is the desire of the State of Wyoming and it is in the best interest of the State and the Greater sage-grouse that Wyoming maintain legal primacy for this species; and

**WHEREAS**, the State of Wyoming continues to be committed both logistically and financially to conserving the Greater sage-grouse; and

~~**WHEREAS**, the State of Wyoming recognizes the necessity of a robust and scientifically rigorous system of monitoring; and~~

Commented [ED2]: Incorporated below

**WHEREAS**, agencies of the State of Wyoming have established oversight mechanisms and implemented management stipulations in compliance with this and previous Executive Orders; and

**WHEREAS**, the listing of the Greater sage-grouse would have a significant, adverse effect on the land and natural resource management of the State of Wyoming beyond that necessary to maintain and enhance Greater sage-grouse populations and habitat; and

**WHEREAS**, the listing of the Greater sage-grouse would have a significant, adverse effect on the economy of the State of Wyoming, including the ability to generate revenues from State lands; and

**WHEREAS**, the listing of the Greater sage-grouse would have a significant, adverse effect on the custom and culture of the State of Wyoming, and would substantially obstruct and conflict with ongoing and effective collaborative efforts to conserve Greater sage-grouse; and

**WHEREAS**, the Wyoming State Legislature, federal, state and local agencies, industry, conservation organizations, and landowners have collaboratively dedicated significant time and resources to conserve Greater sage-grouse populations in Wyoming; and

**WHEREAS**, in order to maintain and enhance Greater sage-grouse populations and adequate sagebrush-steppe habitat, the State of Wyoming has developed and implemented a Greater sage-grouse Core Area Protection strategy; and

**WHEREAS**, this Executive Order is the State of Wyoming's primary regulatory mechanism to conserve the Greater sage-grouse and preclude the need for listing the bird as a threatened or endangered species pursuant to the Endangered Species Act of 1973; and

**WHEREAS**, the Sage-Grouse Implementation Team (SGIT) serves as the oversight team in implementing this Executive Order and the Wyoming State Legislature established the Team as a statutory body (W.S. § 9-19-101) to provide recommendations regarding regulatory actions necessary to maintain and enhance Greater sage-grouse populations and habitats in Wyoming; and

**WHEREAS**, Wyoming's Greater sage-grouse Core Area Protection strategy seeks to protect significant quantity and quality of Greater sage-grouse habitat and ~~protects~~ a substantial portion of Wyoming's Greater sage-grouse; and

**WHEREAS**, the State of Wyoming recognizes that impacts remain after the implementation of protective measures established in the Greater sage-grouse Core Area Protection strategy, and efforts must be taken to reclaim and restore habitats to protect Greater sage-grouse in the State long-term; and

Commented [ED3]: New statement

**WHEREAS**, on April 17, 2008, the Office of the Governor requested that the U.S. Fish and Wildlife Service review Wyoming's Greater sage-grouse Core Area Protection strategy to determine whether it was a "sound policy that should be moved forward" and on May 7, 2008, the U.S. Fish and Wildlife Service responded that the "core population area strategy... is a sound framework for a policy by which to conserve Greater sage-grouse in Wyoming"; and

**WHEREAS**, in its March 23, 2010 status determination for the Greater sage-grouse (Decision; 75 Federal Register 13910, 13974) the U.S. Fish and Wildlife Service stated, "the Service believes that the core area strategy[,] if implemented by all landowners via regulatory mechanisms, would provide adequate protection for sage-grouse and their habitats in that State[;]" and

Commented [ED4]: Need to be updated

**WHEREAS**, in a letter dated November 10, 2010, the U.S. Fish and Wildlife Service again confirmed that "[t]his long-term, science-based vision for the conservation of Greater sage- grouse has set the stage for similar conservation efforts across the species range," and that "the Core Population Area strategy for the Greater sage-grouse provides an excellent model for meaningful conservation of Greater sage-grouse if fully supported and implemented"; and

**WHEREAS**, the State of Wyoming, the Bureau of Land Management, the U.S. Forest Service, and other land management agencies have coordinated Greater sage-grouse Core Area Protection conservation actions across their boundaries which encompass approximately 15 million acres of habitat for the Greater sage-grouse in Wyoming; and

**WHEREAS**, federal land management agencies including the Bureau of Land Management and has revised the U.S. Forest Service are revising or is amending their respective Land and Resource Management Plans consistent with this Executive Order to prioritize conservation of Greater sage-grouse and their habitats; and

**WHEREAS**, Candidate Conservation Agreements with Assurances (CCAA) through the U.S. Fish and Wildlife Service and the Sage-Grouse Initiative (SGI) through the Natural Resources Conservation Service on private lands, complemented by Candidate Conservation Agreements (CCA) on public lands, are a proven means of investing in the future of rural land management; and

**WHEREAS**, significant investments of both time and money have been made by all stakeholders to see the successful implementation of the Greater sage-grouse Core Area Protection strategy; and

WHEREAS, the State of Wyoming recognizes that effective management of Greater sage-grouse in the State will necessitate actively working across jurisdictional boundaries to include the boundary of Wyoming; and

WHEREAS, the State of Wyoming recognizes the necessity of managing Greater sage-grouse adaptively given gaps in our knowledge regarding the species' behavior and management of the species' habitats; and

**WHEREAS**, science, information, and data continue to emerge regarding these gaps in our knowledge of habitats and behaviors of the Greater sage-grouse; and the state of Wyoming recognizes the necessity of a robust and scientifically rigorous system of research and monitoring to address new and existing gaps and to contribute to emerging information; and

WHEREAS, the review process built into Wyoming's Greater sage-grouse Core Area Protection strategy provides a mechanism to evaluate this emerging science, information, and data and has resulted in updated management recommendations from the Sage-Grouse Implementation Team;

WHEREAS, the State of Wyoming is dedicated to the transparent management of Greater sage-grouse and sagebrush habitats in the State and range-wide, including the summarization and dissemination of non-proprietary data by the State, the regular annual reporting of the effectiveness of the Core Area Protection strategy by core area and statewide, and coordination, collaboration, and data sharing with inter-agency monitoring and analyses efforts.

Commented [ED5]: May warrant further discussion within SGIT

Commented [ED6]: New statements

Commented [ED7]: Replaced with subsequent statement

**NOW, THEREFORE**, in consideration of the recommendations of the Sage-Grouse Implementation Team and pursuant to the authority vested in me by the Constitution and Laws of the State, and to the extent such actions are consistent with the statutory obligations and authority of each individual agency, including those found in the Wyoming Regulatory Takings Act, W.S. §§ 9-5-301 through 9-5-305, I, ~~Matthew H. Mead~~ Mark Gordon, Governor of the State of Wyoming do hereby issue this Executive Order providing as follows:

1. Wyoming will manage approximately 15 million acres of Core Population Area habitat to maintain high quality Greater sage-grouse habitat and maintain and enhance populations within normal variability.
- ~~1-2.~~ State agencies shall strive to maintain consistency by following the procedures outlined in this Executive Order, while recognizing that adjustments to the stipulations may be necessary based upon local conditions, opportunities, ~~and limitations,~~ and emerging information. The goal is to minimize future disturbance and maintain and improve the functional integrity of sagebrush habitats within Core Population Areas- to sustain at minimum current (2008) populations of Greater sage-grouse within cyclic norms at state-wide levels- ~~by co-locating proposed disturbances within areas already disturbed or naturally unsuitable.~~
3. State of Wyoming will build and maintain a scientifically and legally defensible mitigation program. This program shall follow the mitigation hierarchy to avoid, minimize and compensate for impacts, as set out in Appendix H, which is incorporated herein by reference. The compensatory mitigation standards of this program will ensure mitigation efforts fully offset direct and indirect residual impacts to sage-grouse habitat function and value. The State of Wyoming further intends ongoing cooperation with other states and the federal government in accordance with the Western Governors' Association 2019-03 Compensatory Mitigation policy resolution.
4. Valid existing rights shall be recognized and respected. Activities existing or permitted in Core Population Areas prior to August 1, 2008, will not be required to be managed under Core Population Area stipulations. Activities existing or permitted prior to the date of this Executive Order and within Core Population Areas added as a result of this Executive Order will not be required to be managed under Core Population Area stipulations (see Attachment A, Figure 2). Examples of existing activities include oil and gas, mining, agriculture, processing facilities, housing, and other uses that were in place prior to the development of the Core Population Areas. Federal and state permitted activities, within a defined project boundary (such as a recognized federal oil and gas unit, drilling and spacing unit, mine plan, subdivision plat, utility ROW, grazing allotment etc.), shall be allowed to continue within the existing boundary even if the use exceeds recommended stipulations (see Attachment A, Figure 1) - recognizing that all applicable federal actions shall continue. Recognizing these existing and permitted stressors on Greater sage-grouse populations in Wyoming, State agencies shall strive to completely offset these impacts individually and cumulatively by enhancing sagebrush habitat conditions throughout the State (see Attachment). All efforts should be made by permitting agencies to work with the permitted owner to voluntarily and measurably reduce and offset impacts.
- ~~2-5.~~ It is critical that existing land uses and landowner activities, as described in preceding statement (#4), continue to occur in Core Population Areas, particularly agricultural activities on private lands. Sustainable ~~Functioning~~ ranches and agricultural lands can provide crucial ecological and habitat services to wildlife, including sage-grouse. The ~~failure degradation~~ or loss of these areas (e.g., to

Commented [ED8]: Previously statement #10, moved up

industrial or subdivision activities, improper livestock management, etc.) could have damaging implications to wildlife and their habitats, including negative impacts to - The loss of these important lands in their current status and role(s) could impact conservation objectives for Greater sage-grouse and other species (USFWS, February 5, 2015, Memo to State Directors and Field Supervisors: Service Position on Livestock Grazing and Working with the Rangeland Owners to Conserve Sage-Grouse).

3-6. For the most part, activities on private lands are not subject to state or federal agency review or approval. Only those activities which state agencies are required by state or federal law to review or approve are subject to review for consistency with this Executive Order. Core Population Areas ~~have been mapped to~~ include additional habitat beyond that strictly necessary to prevent the listing of Greater sage-grouse. The additional habitat included within the Core Population Area boundaries may be is adequate to accommodate continuation of existing land uses and landowner activities, as described in prior statement. State agencies will incorporate land-use activities on private lands into their assessment of sage-grouse habitat functionality, and will strive to offset impacts resulting from incompatible uses of private lands by enhancing sagebrush habitat conditions throughout the State (see Attachment A). Existing land uses and landowner activities deemed to have negligible or no impacts to Greater sage-grouse are exempt from review for consistency under this Executive Order (see Attachment C).

4-7. Land uses and activities proposed inside Core Population Areas for which stipulations have not been developed in this Executive Order may be authorized on a case-by-case basis only when it can be rigorously demonstrated to the satisfaction of the permitting agency, SGIT, and ~~based upon recommendations made by~~ the Wyoming Game and Fish Department, that the activity will not result in avoid negative impacts to Greater sage-grouse.

5-8. Regulatory agencies and departments of the State of Wyoming including, but not limited to, the Office of State Land and Investments, Department of Environmental Quality, State Engineer's Office, Industrial Siting Council and the Oil and Gas Conservation Commission, shall ensure ~~prioritize~~ the maintenance and enhancement of Greater sage-grouse habitats and populations inside the Core Population Areas, connectivity areas, and winter concentration areas identified in Attachment A, Figure 1. These agencies will annually report to the State, the acres that have been impacted, restored or enhanced within Core Population Areas and general sage-grouse habitat areas where the action may influence sage-grouse populations in Core Population Areas. This will include the delivery of all non-proprietary data used to support the conclusion that habitats were restored to functional or enhanced above functional thresholds.

6-9. Development in Core Population Areas consistent with the stipulations set forth in Attachment B is understood to sufficiently minimize negative impacts to Greater sage-grouse in most situations. It is further understood that residual impacts may remain following the implementation of stipulations set forth in Attachment B; State agencies shall strive to mitigate these impacts to completely offset all residual impacts, through a habitat enhancement framework set forth in Attachment A and a mitigation framework set forth in Attachment H.

10. The management of non-core habitats, designated as General Habitat Management Areas (GHMA) in federal plans, should be conducive to maintaining connectivity among Core Populations Areas throughout Wyoming and between habitats in Wyoming and neighboring states (see Attachment).

**Commented [ED9]:** Suggest that "connectivity" be defined in Attachment F, to ensure uniform understanding.

Attachment A refers to connectivity as 2 specific areas in WY, whereas definition should be "Connectivity corridors are recognized as areas important for maintaining the transmission of genetic material between populations"

State agencies shall monitor the conditions of non-core habitats and maintain as functional those habitats that are trending towards becoming important for sustaining sage-grouse populations in the State given changes in the distribution of important habitats.

- ~~7-11.~~ Establishing and maintaining high quality habitat is important to the success of the Core Area Protection strategy. The sooner a disturbed area can return to functioning native habitat, the more likely the ability to maintain both sagebrush habitat and Greater sage-grouse populations. Incentives to accelerate or enhance required reclamation in habitats adjacent to or within Core Population Areas ~~should-shall~~ be developed, including but not limited to stipulation waivers, funding for enhanced reclamation, cost-share partnerships, approaches to mitigation, and other strategies. It is recognized that both Core and non-Core populations could be impacted in the short-term by early reclamation practices, some incentives may result in reduced numbers of Greater sage grouse outside of Core Population Areas.
- ~~8-12.~~ Where consistent with the Greater sage-grouse conservation goals set forth herein, a non-regulatory approach ~~should-shall~~ be used to influence management actions and activities within Core Population Areas. Permit stipulations should reflect unique localized conditions, including soils, vegetation, development type, predation, climate, and other local realities. State agencies shall strive to provide permitting agencies environmental information specific to localized conditions; permitting agencies ~~to~~shall consult with appropriate local expertise when planning management actions, including but not limited to Sage-Grouse Local Working Group(s) and the SGIT.
- ~~9.~~ Wyoming is managing approximately 15 million acres of Core Population Area habitat to maintain high quality Greater sage grouse habitat and maintain and enhance populations within normal variability.
- ~~10-13.~~ Fire suppression efforts in Core Population Areas ~~should-shall~~ be emphasized, recognizing that other local, regional, and national suppression priorities may take precedence. Public and firefighter safety remains the number one priority for all fire management activities.
- ~~14.~~ Control of invasive plant species shall be prioritized within and adjacent to Core Population Areas. Working with the University of Wyoming, State agencies shall strive to develop and implement a State-level invasive plant management plan that builds from ecologically-sound and innovative approaches developed in other portions of the sage-grouse range. Threats posed by invasive plants to wildlife habitat and agricultural production are well-documented and increasing in scope and severity.
- ~~11-15.~~ The State of Wyoming will support research focused on addressing gaps in the behavior or habitat knowledge regarding ~~of activities in winter concentration areas where biologically-significant numbers of Greater sage-grouse nesting in Core Population Areas are suspected of congregating. Further,~~ The State of Wyoming will prioritize developing appropriate local, science-based standards to manage disturbance in identified and mapped winter concentration areas (see Attachment A, Figure 1).
- ~~12-16.~~ To ensure continued sustainability of Wyoming's economy, all efforts to encourage, enhance, and prioritize development outside of Core Population Areas shall be made. Development in non-core areas shall be guided by the standards set forth in Attachment B and take into account long-term sage-grouse population sustainability and the habitat needs of other wildlife species of concern that rely on these areas. State and federal agencies, with other relevant stakeholders,

Commented [ED10]: Moved to become statement #1

Commented [ED11]: New statement

shall ~~should~~ work collaboratively to develop and implement a strategic plan that~~to~~ achieves both a beneficial and sustainable balance between Greater sage-grouse protection and Wyoming's economy in a manner that does not result in sage-grouse population declines. Incentives, prioritization of projects outside of Core Population Areas, and streamlining permit processes shall ~~should~~ be considered.

~~13.~~17. State and federal agencies, including the U.S. Fish and Wildlife Service, Bureau of Land Management, U.S. Forest Service, Wyoming Game and Fish Department, and other stakeholders shall work collaboratively to ensure a uniform and consistent application of this Executive Order to maintain and enhance Greater sage-grouse habitats and populations. The State of Wyoming should be informed of all exceptions, waivers and modification to development stipulations in sage-grouse habitat to include the delivery of analyses of impact and all non-proprietary data.

~~14.~~18. State agencies shall work collaboratively with all appropriate stakeholders to maintain and enhance Greater sage-grouse habitats and populations consistent with the language and spirit of this Executive Order.

19. State agencies shall work collaboratively with those responsible for the management of Greater sage-grouse in all States with populations of the species to ensure Wyoming's strategy is maintained as an integral component of management of Greater sage-grouse across the range of the species.

Commented [ED12]: New statement

~~15.~~20. The State of Wyoming will support voluntary enrollment and expanded coverage of programs and actions that protect, restore, reclaim and enhance sagebrush habitats throughout the State, including but not limited to for conservation easements, CCAAs, CCAs, and commensurate improvements and investments by the U.S. Department of Agriculture and the U.S. Fish and Wildlife Service, where appropriate. The State will support and incentivize the improvement of sagebrush habitats either as a component of these agreements or as stand-alone efforts. These efforts shall ~~should~~ be focused and prioritized to take place in Core Population Areas and non-Core areas important for connectivity and long-term sage-grouse population sustainability.

~~16.~~21. On-the-ground enhancements, monitoring, and ongoing planning relative to sage-grouse and sage-grouse habitat should be conducted in collaboration with local conservation partners whenever possible. Sage-grouse Local Working Groups will continue to be engaged through the Local Working Group Charter and represent potential partners, among other local and regional efforts ongoing throughout the State.

~~17.~~22. The State of Wyoming will engage in adaptive management that will include the involvement of state and federal land management and regulatory agencies as appropriate (see Attachment B). To support these efforts, the State of Wyoming will support the development and maintenance of a comprehensive and accessible source of information containing all data and reports relevant the implementation of this Executive Order.

~~18.~~23. State agencies shall document and publish ~~report~~ all conservation and permitted actions occurring within Greater sage-grouse Core Population Areas annually, or more frequently, as determined necessary. The State of Wyoming shall work collaboratively with federal, state, county, private, and non-governmental organizational partners to ensure collection of data to determine the condition of Core Population Areas individually and collectively in relation to the goals of the Wyoming Greater Sage-grouse Core Protection strategy. Reporting shall include the delivery of all non-proprietary data collected as part of these actions.

24. Working with research organizations, including the University of Wyoming, The State of Wyoming shall work with federal, state, county, private and non-governmental organization partners to collect analyze data to determine the condition of each Core Population Area individually and all Core Population Areas collectively, in relationship to meeting the goals of the Wyoming's Greater sage-grouse Core Area Protection strategy, as established herein. The State of Wyoming shall continue to monitor, collect data on Greater sage-grouse populations, and development and conservation activities, and analyze and report these data annually for the life of this Executive Order to ensure that permitted activities and voluntary actions under this authority result in sustained sage-grouse populations within cyclical trends.

19-25. Absent substantial and compelling information that adjustments are necessary to protect the integrity of the Greater sage-grouse Core Area Protection strategy, these Core Population Areas, connectivity areas, identified and mapped winter concentration areas, and protective stipulations identified in this Executive Order shall not be altered for a minimum of 7-4 years.

20. The State of Wyoming shall continue to monitor and document Greater sage-grouse populations and development activities to ensure that permitted activities under this authority do not result in negative impacts to Greater sage-grouse outside cyclical trends.

**Commented [ED13]:** Incorporated into previous statement, new #24

21-26. This Executive Order, together with its attachments, constitutes Wyoming's strategy for the conservation of the Greater sage-grouse and their habitats. Attachments A through I are expressly adopted and incorporated by reference herein, and each shall have the full force and effect of this Executive Order.

Given under my hand and the Executive Seal of the State of Wyoming this \_\_\_\_ day of July, 2015.



EXECUTIVE ORDER 2015-4  
ATTACHMENT A

Figure 1.

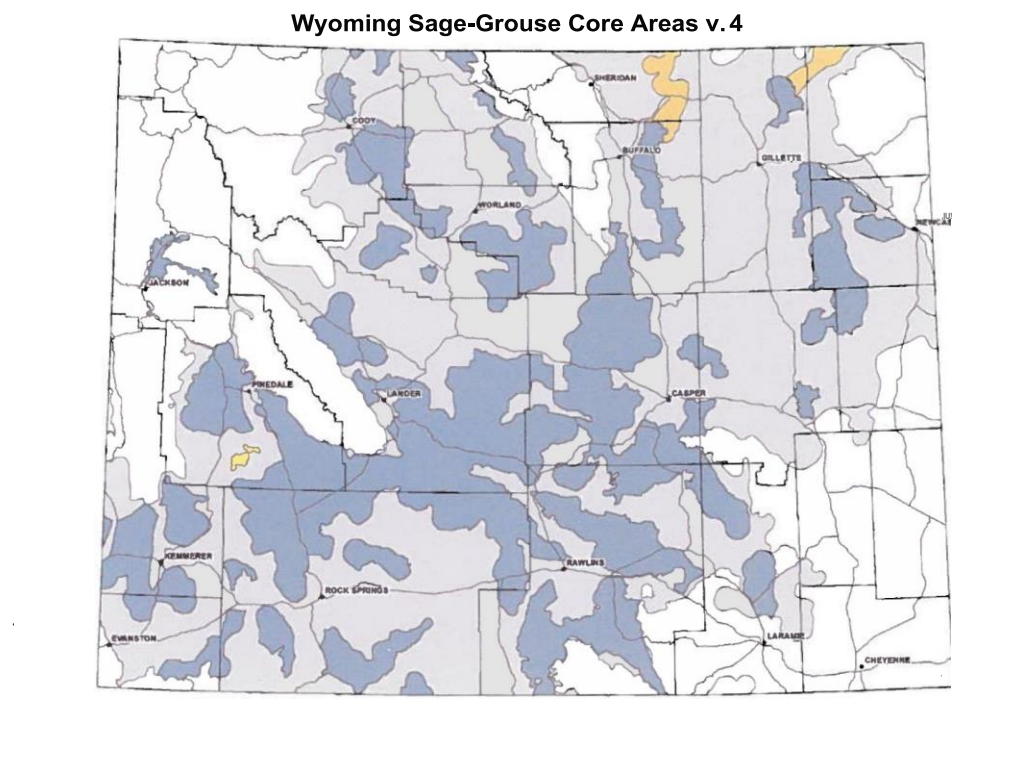
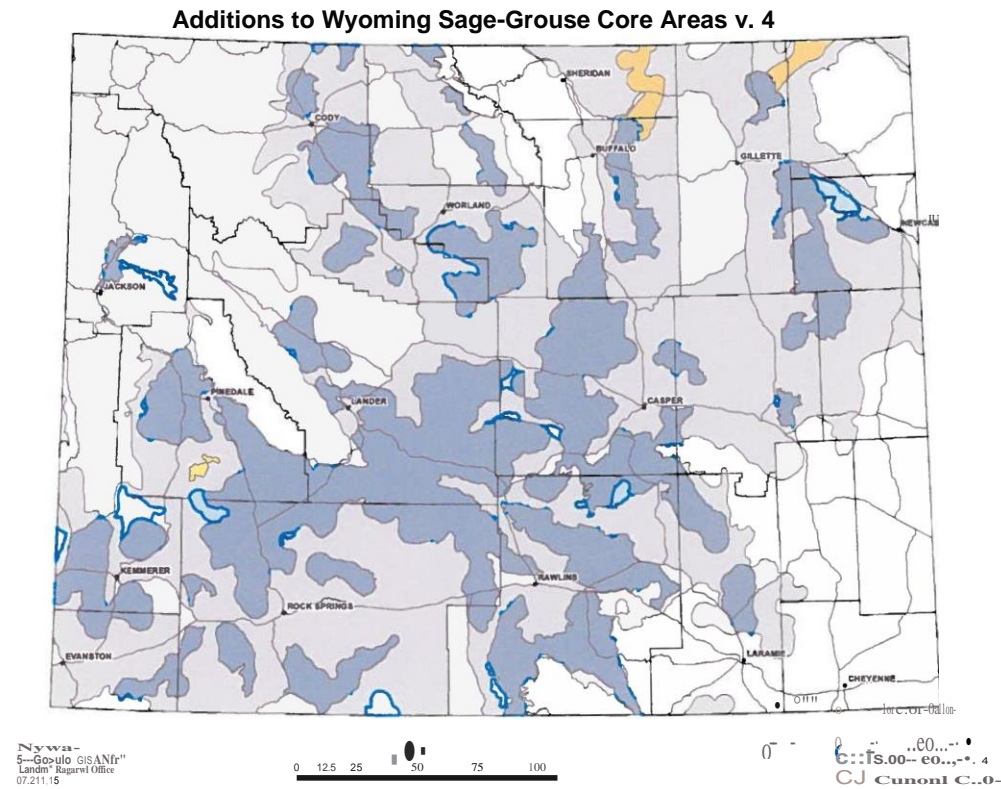


Figure 2.

Commented [ED1]: Suggest removing figure



**~~HOW THE WYOMING CONCEPTS BEHIND THE GREATER SAGE-  
GROUSE CORE AREA PROTECTION STRATEGY WAS  
DEVELOPED~~**

Beginning in 2007, the Sage Grouse Implementation Team was charged with three primary tasks: (1) identification of areas where Greater sage-grouse and their habitats would be most effectively conserved, (2) development of a strategy to reduce or eliminate potential threats to the species, and (3) development of methodology to evaluate, document and track potential impacts over time. The following describes those efforts to date.

**1. Establishment of Greater Sage-Grouse Core Population Areas**

Greater sage-grouse lek location and attendance data as identified through modeling of bird populations and habitat were overlaid with areas of valid existing rights to produce the Greater sage-grouse Core Population Area map for Wyoming (Figure 3). This iterative process consisted of a series of reviews conducted in the field by Local Working Group (LWG) and others with a thorough understanding of local Greater sage-grouse use to assure that areas included as core habitat were a true representation of actual conditions on the ground. Similar processes were used in 2010 (Figure 4) and 2015 (Figure 5) to refine the Core Population Area mapping, resulting in the current Core Population Areas.

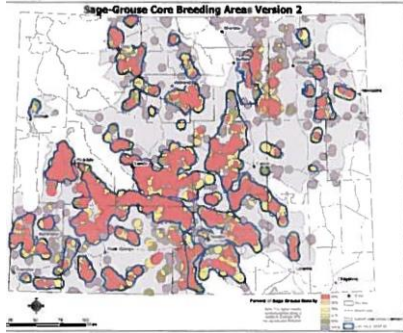


Figure 3. Greater sage-grouse breeding density and Core Population Areas (Version 2) associated with Executive Order 2008-2.

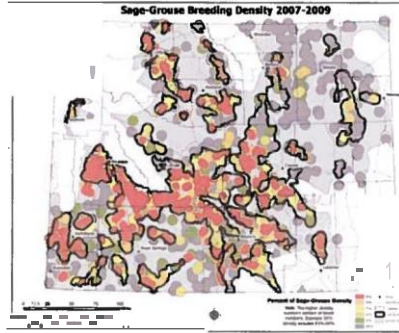


Figure 4. Greater sage-grouse breeding density and Core Population Areas (Version 3) associated with Executive Orders 2010-4 and 2011-5.

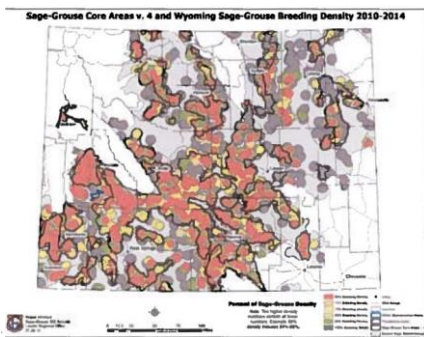


Figure 5. Greater sage-grouse breeding density and Core Population Areas (Version 4) associated with Executive Order 2015-4.

A kernel density function was applied to the lek location and attendance data to develop the final Greater sage-grouse density maps and later adjustments (Doherty et al. 2010, 2011). The red areas on Figures 3 and 4 represent the breeding habitat for 65% of Greater sage-grouse in Wyoming based on lek size and location. The maps illustrate population proportions at a given time, not trends over time. This method was based on breeding birds and did not take into account late brood-rearing and wintering seasonal habitats. During the 2010 revision of Core Population Area boundaries in Wyoming, both late brood-rearing and winter use were considered in the process and most of these seasonal habitats associated with birds in the existing Core Population Area were included in the final product (Figure 4). The eight LWGs assisted in the revision process by using highly-detailed habitat imagery (1 meter NAIP) and reviewing new

lek and development data. These activities were open to the public and other interests throughout the process.

The resultant 2008, 2010 and 2015 (Figures 3, 4, and 5) Core Population Areas encompass approximately 83% of the Greater sage-grouse population, on approximately 24% of the surface area of the State of Wyoming (unpublished data, Wyoming Game and Fish Department, Gamo et al. 2013).

### **Population Connectivity Areas**

~~Connectivity corridors are recognized as areas important for maintaining the transmission of genetic material between populations. These corridors have been identified as the most likely dispersal routes used by Greater sage-grouse to travel between potentially isolated populations in Wyoming to populations in neighboring states. Viable corridors reduce the threat of creating isolated populations in Wyoming and adjacent populations in neighboring states. Connectivity corridors are managed to limit anthropogenic development and have been delineated to increase the likelihood of natural immigration/emigration important for maintaining genetic variability in Core Populations Areas.~~

It is becoming increasingly apparent that the movement of genetic material among populations of Greater sage-grouse reduces the threat of isolating populations and is as such critical for sustaining populations in core areas in Wyoming (Knick et al. 2013, Row et al. 2015, Crist et al. 2017, Burkhalter et al. 2018, Heinrichs et al. In Press). The movement of genetic material requires the movement of individual sage-grouse among populations throughout Wyoming and between core areas and priority sage-grouse management areas in neighboring states. Non-core habitats and connectivity corridors are recognized as areas important for maintaining these movements. Connectivity corridors have been delineated between core areas in northeastern Wyoming and priority areas in southeastern Montana to increase the likelihood of natural immigration/emigration; these corridors are managed to limit anthropogenic development and maintain movement. The State of Wyoming continues to work with managers in Montana to update these corridors as necessary. The State of Wyoming is further working with managers in Colorado and Utah to identify and manage connectivity corridors between these states and core areas in southwestern and south-central Wyoming. To maintain connectivity among core areas throughout Wyoming, the State is managing non-core habitats in a manner that sustains natural immigration/emigration of individual sage-grouse.

### **Winter Concentration Areas**

The identification of Core Population Areas is intended to capture all seasonal requirements for Greater sage-grouse; however, there is a recognition that in some cases Core Population Areas may not capture all Greater sage-grouse needs (Aldridge and Boyce 2007, Doherty et al. 2008, Doherty et al. 2011). Specifically, winter concentration areas, defined as places where large numbers of Core Population Area Greater sage-grouse congregate and persistently occupy between December 1 and March 14, should be identified and protected. Identification of winter concentration areas should be based on habitat features and repeated observations of winter use by biologically significant numbers of Greater sage-grouse (e.g., relatively large groups of ≥50 Greater sage- grouse repeatedly using a

particular area, or concentrating in an area during severe winter conditions) using a validated-Resource Selection Function (RSF) statistically rigorous, spatially-explicit modeling approach.

## **2. Management Goals and Mitigation in the Greater Sage-Grouse Core Area Protection Strategy**

The Wyoming Greater sage-grouse Core Area Protection strategy represents a proactive identification of a set of conservation actions to maintain and enhance a viable and connected set of populations before the opportunity to do so is lost (Doherty et al 2011). The strategy is based on the identification of important habitat areas for Greater sage-grouse and a set of actions that when taken are intended to ensure the long-term survival of Greater sage-grouse populations in Wyoming. The strategy follows an established hierarchy of *avoidance*, understanding that the primary mission is avoiding impacts to and protecting the best remaining habitat for Greater sage-grouse; *minimizing* impacts where they cannot first be avoided; and when Core Populations are negatively impacted Area thresholds are exceeded, *compensating* for any unavoidable impacts to Greater sage-grouse. The strategy further recognizes that establishing and maintaining high quality sagebrush habitats throughout the States is critical to the success of the core population area concept. In this regard, the strategy follows an approach of incentivizing accelerated restoration and reclamation of impacted habitats, and promoting enhancement of suboptimal habitats throughout the State.

### **Avoidance**

Preferred development plans avoid negative impacts in Core Population Areas and other Executive Order delineated habitats used by Core Population Area Greater sage-grouse. This maximizes protections for both Greater sage-grouse and sagebrush habitat. Avoidance can be both spatial and temporal.

### **Minimization**

When development occurs within Core Population Areas and other Executive Order delineated habitats used by Core Population Area Greater sage-grouse, all reasonable options are pursued to minimize impacting additional suitable habitat and/or maintaining impacts below identifiable thresholds to the greatest extent possible. This may result in new disturbance within Core Population Areas, but the disturbance is managed not to exceed Executive Order thresholds and result in no discernible impacts at the population level. Development plans are managed to limit disturbance to less than 5% and no more than an average of one oil and gas pad or mining site per 640 acres within the Density Disturbance Calculation Tool (DDCT) project area. This level of development minimizes impact to core population areas, but does not eliminate that impact. Although the State seeks to offset residual impacts through habitat enhancement approaches incentivized and promoted through the strategy, compensation may be required to offset residual impacts in certain situations.

### **Compensation**

The complexity of developing compensatory mitigation projects that provide biologically

meaningful benefits to Greater sage-grouse populations requires rigorous standards for mitigation to be defined and developed. Performance standards (e.g., net benefit to Greater sage-grouse), monitoring requirements, and adaptive management plans ~~should-will~~ explicitly link landscape conservation actions to Core Population Areas and other Executive Order delineated habitats used by Core Population Area Greater sage-grouse and statewide landscape conservation objectives for Greater sage-grouse. See also Attachment H.

### **Enhancement**

To conserve Greater sage-grouse in the state of Wyoming long-term, the State's strategy must concurrently address both the preservation of existing conditions through avoidance, minimization and compensation, and the enhancement of degraded sagebrush habitats throughout the State. Managing to restore degraded habitats is a product of both enhancing suboptimal habitats impacted by historic management, and developing and implementing strategies to guard against future degradation (e.g., invasive annual grass management). The State is actively engaged in collaborative efforts to enhance sagebrush habitats, and will continue to develop approaches to incentivize and promote habitat enhancement through amendment and interpretation of this Executive Order. This includes, but is not limited to, incentivizing habitat enhancement and restoration in the mitigation framework (see Attachment H), promoting management practices necessary to transition sagebrush habitats to reference conditions (see Cagney et al. 2010), supporting the University of Wyoming in invasive plant management, etc.

### **3. Use of the DDCT in Managing the Greater Sage-Grouse Core Area Protection Strategy**

A 4-mile radius around active leks captures 74-80% of nesting females associated within their lek of breeding. The 4-mile distance has been confirmed by multiple studies as having particular importance to Greater sage-grouse in the West, including the majority of seasonal habitats associated with an individual lek, and falls within a reasonable range of buffers (Manier et al. 2014) for Greater sage-grouse. This radius accounts for ~~all-most~~ types of disturbance within the background of measurable impacts to Greater sage-grouse in field studies. By using the 4-mile radius, the DDCT achieves both a realistic consideration of impacts in a relevant assessment area, while avoiding dilution of existing disturbance being considered in conjunction with any one proposed development.

### **Core Population Area Monitoring and Management:**

A system of interagency coordination has been developed to monitor and track development and conservation activities across Core Population Areas to determine whether development actually meets the thresholds of this Executive Order (see Attachment B). These data are also used to assess the effectiveness of the combined aspects of this strategy (preservation and enhancement). Reports shall be developed on an annual basis and be made publically-accessible. Reports shall include estimated levels of development in core areas as they relate to the thresholds in this Executive Order, as well as other habitat metrics deemed necessary to accurately track habitat conditions in Core Population Areas (e.g., metrics relevant at broad spatial scales), and the results of analyses of

the combined effects of preservation and enhancement activities on sage-grouse population change and sagebrush habitat suitability.

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**EXECUTIVE ORDER 2015-4  
ATTACHMENT B**

**Permitting Process and Stipulations for Development  
in Greater Sage-Grouse Core Population Areas**

**PERMITTING PROCESS**

**Point of Contact**

The density of disruptive activities (1/640) and surface disturbance (5%) will be analyzed via the Density/Disturbance Calculation Tool (DDCT), and will be conducted by the Federal Land Management Agency or project proponent (as determined by the BLM Field Office Manager) on federal surface/mineral and the project proponent on non-federal (private, state). The DDCT analysis is then evaluated against Executive Order 2015-4 thresholds. Funding for these analyses is provided by state and federal partners and the proponent, and funding to maintain the DDCT database is provided by the state.

When State agency permit is needed, without a need for a federal permit:

The first point of contact for addressing Greater sage-grouse Core Population Area issues for any state permit application should be the Wyoming Game and Fish Department (WGFD). Project proponents should contact WGFD at least 45-60 days prior to submitting their application. More complex projects will require more time. It is understood that WGFD has a role of consultation, recommendation, and facilitation, and has no authority to either approve or deny the project. The purpose of the initial consultation with the WGFD is to become familiar with the project proposal and ensure the project proponent understands the DDCT and recommended stipulations. Project proponents need to have a thorough description of their project and identify the potential effects on Greater sage-grouse of the proposed project prior to submitting an application to the permitting agency.

When Federal agency permit is needed, with or without a State permit:

When a project requires federal action prior to approval, the proponent should contact the federal agency responsible for reviewing the action. The federal agency and the proponent will determine the best process for completing the DDCT and receiving recommendations from WGFD. Project proponents need to have a thorough description of their project and identify the potential effects on Greater sage-grouse of the proposed project prior to submitting an application to the permitting agency (see Attachment D).

**Maximum Density and Disturbance Process**

Density and Disturbance Calculation: The DDCT, ([ddct.wygisc.org](http://ddct.wygisc.org)), is a spatially-based tool that calculates both the average density of disruptive activities and total surface disturbance within the area affected by the project, or DDCT assessment area. The DDCT assessment area

is created based on an initial radius around projects proposed in Greater sage-grouse Core Population Areas (Doherty et al. 2011), and subsequent radius around any occupied, Core Population Area leks within the initial radius (see Figures I - 2). A 4-mile radius is used to identify 75% of the Greater sage-grouse use around a lek (Walker et al. 2007, Fedy et al. 2012). Any portion of the analysis area not found in core is removed (see Figure 3). All activities will be evaluated within the context of maximum allowable disturbance (disturbance percentages, location and number of disturbances) of suitable Greater sage-grouse habitat (see Attachment F for definition of suitable Greater sage-grouse habitat and disturbance of suitable Greater sage- grouse habitat) within the DDCT assessment area (see Figure 4). This tool allows for better siting of projects rather than averaging the density/disturbance calculation per section.

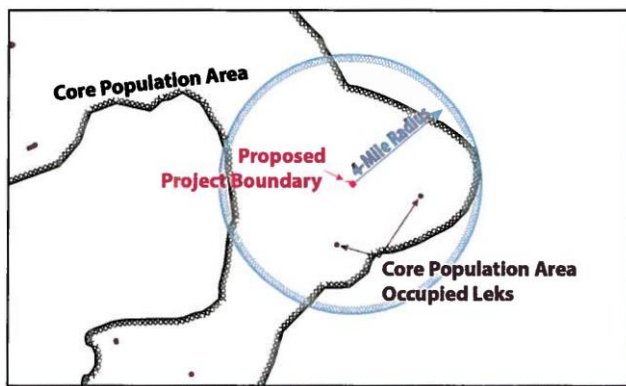


Figure 1 - DDCT assessment area step 1, proposed project boundary.

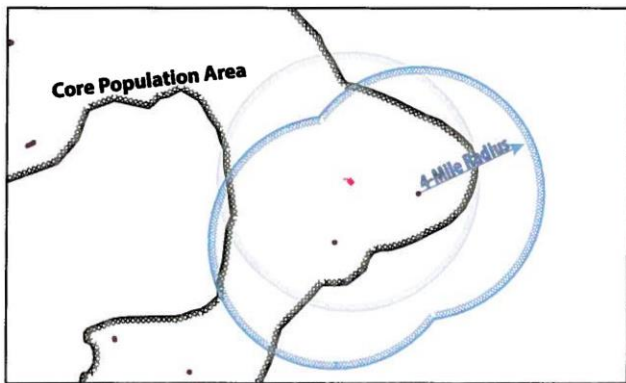


Figure 2 - DDCT assessment area step 2, lek boundaries.

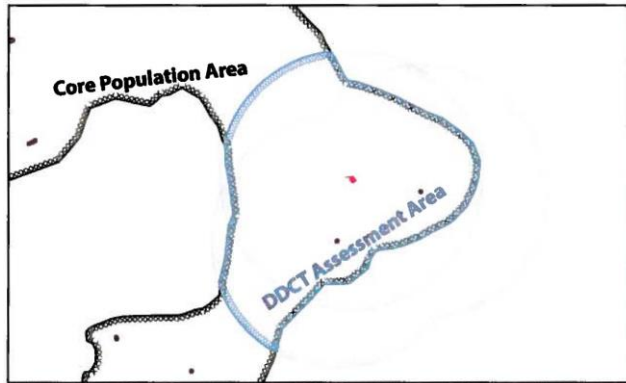


Figure 3 - DDCT assessment area step 3, remove non-core population areas.

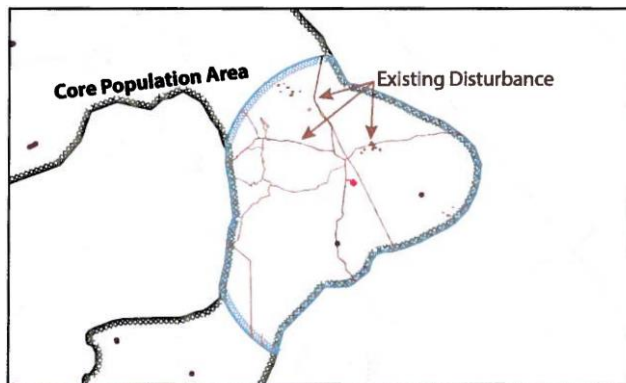


Figure 4 - Existing and proposed disturbance in the DDCT assessment area.

All lands within Core Population Area boundaries are considered suitable habitat unless documented. Mapped unsuitable habitat is treated as neither suitable habitat, nor disturbance, which results in the area being removed from the DDCT assessment area altogether. [Disturbance is analyzed for the DDCT as a whole and for each individual affected lek within the DDCT.](#)

**Density and disturbance analysis:** The total number of discrete disruptive activity features, as well as the total disturbance acres within the DDCT assessment area will be determined through an evaluation of:

- Existing disturbance (Greater sage-grouse habitat that is disturbed due to existing anthropogenic activity and wildfire).
- Approved permits (that have approval for on the ground activity) not yet implemented.
- Validation of the digitized disturbance through on the ground evaluation.

## Avoiding and Minimizing Impacts

See Attachment A.

The following is the suggested administrative process for avoiding and minimizing impacts, as necessary.

For valid existing rights: If the proposed project DDCT is at or above Executive Order thresholds, the project proponent, WGFD and the permitting agency must determine whether or not there are ways to avoid or minimize impacts to Greater sage-grouse before issuing a permit to proceed.

The proponent will work with the permitting agency to site the project within the permit/lease area in a way that will likely have the least amount of impact on local Greater sage-grouse populations (i.e., existing anthropogenic disturbance, geographically remote from Greater sage-grouse habitat, unsuitable habitats). The surface disturbance and disruptive activity resulting from the proposed project will still count towards the 5% disturbance and 1/640 density thresholds (unless the proponent can show that there is a 0.6 mile buffer of unsuitable habitat between the proposed disturbance and suitable habitat). It is understood that project locations are often resource specific and that certain projects may not be able to be relocated to another location.

The proponent and the permitting agency will evaluate the DDCT area and the affected Greater sage-grouse Core Population Area for areas where additional reclamation/restoration actions and habitat enhancement (reference Attachment A) or management of invasive species (especially within the proponent's permit/lease area(s)) could reduce the amount of overall disturbance.

The proponent and the permitting agency ~~should will further~~ consider other opportunities to improve Greater sage-grouse habitat (i.e., ~~conservation easements~~, additional reclamation of disturbed habitats in suitable habitats that are no longer necessary, restoration of suboptimal habitats) within the impacted Core Population Area.

Commented [ED2]: Remove as this is not technically an "improvement" to existing habitat.

Should the proponent and the state permitting agency not come to agreement; the Sage Grouse Implementation Team (SGIT) will review the information and pursue enhancement activities in the impacted Core Population Area or a core area new to the impact to the level necessary to offset the impact. The BLM and U.S. Forest Service both have their own appeal process to handle disagreements ~~but may and will~~ coordinate through the SGIT to offset residual impacts resulting from the appeal decision.

## Permitting

The complete analysis package (DDCT results, map book, and worksheet), and recommendations developed by consultation and review outlined herein, will be forwarded to the appropriate permitting agency(s). WGFD recommendations will be included, as will ~~other~~

recommendations from project proponents and other appropriate agencies. Project proponent shall have access to all information used in developing recommendations. Where possible and when requested by the project proponent, State agencies shall provide the project proponent with potential development alternatives other than those contained in the project proposal.

If the permit for which a proponent has applied expires, another DDCT analysis is required before issuing a new permit. An additional DDCT is not required for Permit extensions or renewals when no changes are being authorized.

The Executive Order in effect at the time of a complete formal application will remain in effect through the final permit.

Projects that have formally applied for a permit (e.g., CPCN, CUP, NOA, NOI, Initiation of scoping, other permits, or other official public action declaring the project, etc.) should comply with the Executive Order in effect when the project application was made. It is recognized that project planning and permitting can take years to move to a final permit.

### EXEMPT ACTIVITIES

A list of exempt ("de minimus") activities, including standard uses of the landscape is available in Attachment C.

### GENERAL STIPULATIONS

These stipulations are designed and intended to maintain existing suitable Greater sage-grouse habitat by permitting development activities in Core Population Areas in a way that will ~~avoid~~ minimize negative impacts to Greater sage-grouse.

General stipulations are recommended to apply to all activities in Core Population Areas, with the exception of exempt ("de minimus") actions defined herein (see Attachment C) or specifically identified activities. The specific industry stipulations are considered in addition to the general stipulations.

#### Surface Disturbance

Core Population Area: Surface disturbance will be limited to 5% inclusive of suitable Greater sage-grouse habitat and 1/640 average density ~~per an average of 640 acres~~ over the entire DDCT assessment area and within 4 miles of the perimeter of all leks incorporated into the DDCT analysis area. The DDCT process will be used to determine the level of disturbance. Should disturbance exceed 5% or 1/640 average density, ~~D~~istribution of disturbance may be considered and approved on a case-by-case basis. Unsuitable habitat should be identified in a seasonal and landscape context, on a case-by-case basis, outside the 0.6 mile buffer around occupied leks.

This will incentivize proponents to locate projects in unsuitable habitat to avoid creating

additional disturbance acres. The primary focus should be on protection of suitable habitats and minimizing habitat fragmentation (e.g., “clumping” of infrastructure). See Attachment F for a description of suitable, unsuitable habitat and disturbance.

Non-Core Population Area: There are no limitations to disturbance outside the 0.25 mile no surface occupancy buffer. However, project proponents are required to provide the WGFD with a thorough description of their project and identify the potential effects on core population area connectivity of the proposed project prior to submitting an application to the permitting agency. If the proposed project is deemed to impact movement potential among core population areas, the project proponent, WGFD and the permitting agency must determine whether or not there are ways to avoid or minimize these impacts before issuing a permit to proceed. The proponent will work with the permitting agency to site the project within the permit/lease area in a way that will likely have the least amount of impact on connectivity. Should the proponent and the state permitting agency not come to agreement, the Sage-Grouse Implementation Team (SGIT) will review the information and pursue actions to establish or restore a movement corridor that could act to replace the corridor disrupted by the activity, including but not limited to the official designation (and associated management as described below) of a connectivity corridor in this SGEO, especially in situations where potential movements between specific core areas are limited. The BLM and U.S. Forest Service both have their own appeal process to handle disagreements and will coordinate through the SGIT to restore and protect connectivity among core population areas if impacts remain after the appeal decision.

#### **Surface Occupancy**

Core Population Area: Within 0.6 miles of the perimeter of occupied Greater sage-grouse leks there will be no surface occupancy (NSO). NSO, as used in these recommendations, means no permanent surface facilities including roads shall be placed within the NSO area. Other activities may be authorized with the application of appropriate seasonal stipulations, provided the resources protected by the NSO are not adversely affected. For example, underground utilities may be permissible if installation is completed outside applicable seasonal stipulation periods and significant resource damage does not occur, and any damage that does occur is reclaimed quickly and adequately. Seasonal protections are to be determined on principal usage of site by Greater sage-grouse. The primary purpose of the 0.6 restriction around leks is to avoid disturbing lekking birds sage-grouse and to maintain lekking habitat integrity (Holloran 2005, Hess and Beck 2012). This necessitates the limitation of traffic or infrastructure that would encourage human activity around occupied leks.

Non-Core Population Area: Within 0.25 miles of the perimeter of occupied Greater sage-grouse leks there will be NSO (Braun et al. 2002). NSO, as used in these recommendations, means no permanent surface facilities including roads shall be placed within the NSO area. Other activities may be authorized with the application of appropriate seasonal stipulations, provided the resources protected by the NSO are not adversely affected. For example, underground utilities may be permissible if installation is completed outside applicable seasonal stipulation periods and significant resource damage does not occur, and any damage that does occur in reclaimed quickly and adequately.

## Seasonal Use

Core Population Areas (Holloran 2005): Activities will be allowed from July 1 to March 14 outside of the 0.6 mile perimeter of an occupied lek in Core Population Areas where breeding, nesting and early brood-rearing habitat is present. A 4-mile seasonal buffer from March 15 to June 30 applies to occupied leks where breeding, nesting and early brood-rearing habitat is present. Activities may be allowed during seasonal closure periods, or restricted for longer periods of time during the year, as determined on a case-by-case basis.

Non-Core Population Areas (Braun et al. 2002, Dzialak 2011): Activity will be allowed from July 1 to March 14 outside of the 0.25 mile perimeter of an occupied lek. A 2-mile seasonal buffer from March 15 to June 30, applies to occupied leks where breeding, nesting and early brood-rearing habitat is present. Activities in unsuitable habitat may ~~also~~ be approved year-round on a case-by-case basis. Activities may be allowed during seasonal closure periods, or restricted for longer periods of time during the year, as determined on a case-by-case basis.

Special Considerations: Where credible data support different timeframes for these seasonal restrictions, dates may be shifted to protect breeding, nesting and early brood-rearing sage-grouse, 14 days prior to or subsequent to the above dates, but not both.

Winter Concentration Areas: In areas identified as winter concentration areas, activities will be allowed March 14 to December 1. Activities in unsuitable habitat may also be approved year-round on a case-by-case basis (except in specific areas where credible data shows calendar deviation). Activities may be allowed during seasonal closure periods, or restricted for longer periods of time, as determined on a case-by-case basis.

Production and Maintenance Activities: Production and maintenance activities are exempt from seasonal use stipulations. However, these activities may impact sage-grouse in core population areas adversely. In situations where it is established that production and maintenance activities are impacting core population area populations, the project proponent will work with the WGFD and the permitting agency to minimize and compensate for those impacts (see Attachment A). Should the proponent and the state permitting agency not come to agreement, the Sage-Grouse Implementation Team (SGIT) will review the information and pursue enhancement activities in the impacted Core Population Area or a core area near the impact to the level necessary to offset the impact. The BLM and U.S. Forest Service both have their own appeal process to handle disagreements and will coordinate through the SGIT to offset residual impacts resulting from the appeal decision.

## Geophysical Exploration

Geophysical exploration which includes minimal disturbance (3 inch diameter drill holes or just "vibrating") may be permissible in accordance with seasonal stipulations. Staging areas should be located outside of Core Population Areas, covered through a DDCT process, or placed on existing disturbance.

## Transportation

Locate new collector or arterial roads that will have relatively high levels of activity (accessing multiple wells, housing development) greater than 1.9 miles from the perimeter of occupied Greater sage-grouse leks (Lyons and Anderson 2003). Locate new local roads used to provide facility site access and maintenance greater than 0.6 miles from the perimeter of occupied Greater sage-grouse leks. Construct roads to minimum design standards needed for production activities. Vehicle use of roads in core population areas should be minimized to the extent possible. Maximize the use of remote approaches to monitor wells and retrieve condensate (e.g., liquid gathering systems) to minimize traffic on all roads.

Collector or Arterial Roads are single-lane or double-lane roads, with travel ways 12 to 24 feet in width. They collect traffic from local roads and connect to arterial roads or public highways. They are operated for intermittent or constant service.

Local Roads are single-lane roads with travel ways 12 to 14 feet in width. They connect terminal facilities, such as well sites, to collector, local, arterial, or other higher-class roads. They are operated for low-volume traffic.

### Overhead Power Lines (Avian Power Line Interaction Committee (APLIC) 2015)

It will be necessary to construct significant new transmission infrastructure to transport electricity generated in Wyoming to out-of-state load centers. The preponderance of recent scientific evidence suggests transmission lines negatively impact sage-grouse populations up to 12.5 km from the line (Gibson et al. 2018, Kohl et al. 2019, LeBeau et al. In Review). ~~Currently, it is unknown what type of lines impact Greater sage-grouse populations, how, and to what extent (Messmer, et al. 2014).~~ There will be new distribution and transmission lines that will need to be built to service existing approved projects.

For purposes of consistency with this Executive Order there is established a transmission line corridor through Core Population Areas in south central and southwestern Wyoming as illustrated on Attachment I. This 2-mile wide corridor represents the State of Wyoming's preferred alternative for routing electric transmission lines across the southern portion of the state while reducing impacts to Core Population Areas and other natural resources.

New transmission lines constructed within corridors identified in this Executive Order (see Attachment I) or within 1/2-mile either side of existing or permitted (prior to August 1, 2008) 115 kV or larger transmission lines, creating a corridor no wider than 1-mile shall be considered consistent with this Executive Order if construction occurs within the corridor between July 1 and March 14 (or between July 1 and December 1 in Executive Order identified and mapped winter concentration areas). New transmission lines constructed within 1/2-mile either side of 115kV or larger transmission lines in existence or permitted prior ~~to the 2015 to the date of this~~ Executive Order and within Core Population Areas ~~added as a result of this Executive Order~~, creating a corridor no wider than 1-mile, shall be considered to be consistent with this Executive Order if construction occurs within the corridor between July 1 and March 14 (or between July 1

and December 1 in Executive Order identified and mapped winter concentration areas). These dates are subject to further restriction on a case-by-case basis.

New transmission lines outside the above described corridors but within Core Population Areas should be authorized or conducted only when it can be rigorously demonstrated that the activity will avoid negative impacts to Greater sage-grouse. If it is absolutely necessary to site new distribution and transmission lines through a Core Population Area outside of an existing corridor, lines should be sited to minimize negative impact on Greater sage-grouse or their habitats, and preferentially consider siting along or adjacent to existing long-term linear disturbance features whenever possible (i.e., along existing occupied above ground utilities or roads).

Proponents are encouraged to apply appropriate Best Management Practices (BMPs) specific to electric utility facilities (see APLIC 2015); otherwise, locate overhead lines at least 0.6 miles from the perimeter of occupied Greater sage-grouse leks.

Lines permitted but not located in an Executive Order transmission corridor will be counted towards the 5% disturbance calculation (line disturbance is equal to ROW width X length and includes all access roads, staging areas, and other permanent surface disturbance associated with construction outside of the ROW). Transmission lines located outside of a transmission corridor but within core population areas will require compensation regardless of the outcome of the DDCT.

#### Noise

New project noise levels, either individual or cumulative, should not exceed 10 decibels (as measured by  $L_{50A 1800-0800 \text{ hrs}}$ ) above baseline noise (as measured by  $L_{90A 1800-0800 \text{ hrs}}$ ) at the perimeter of a lek ~~from 6:00 pm to 8:00 am~~ during the breeding season (March 1 to May 15). The monitoring protocol now available from the WGFD shall be used to measure noise levels. Previous measurements made in Wyoming relative to sage grouse used varying protocols as well as meters with varying sensitivity. It is essential that those monitoring sound report the limitations of their data, especially the influence of instrument self-noise and the noise floor of their instruments. Specific noise protocols for measurement and stipulations for implementation will be developed as additional research and information emerges.

#### Vegetation Removal

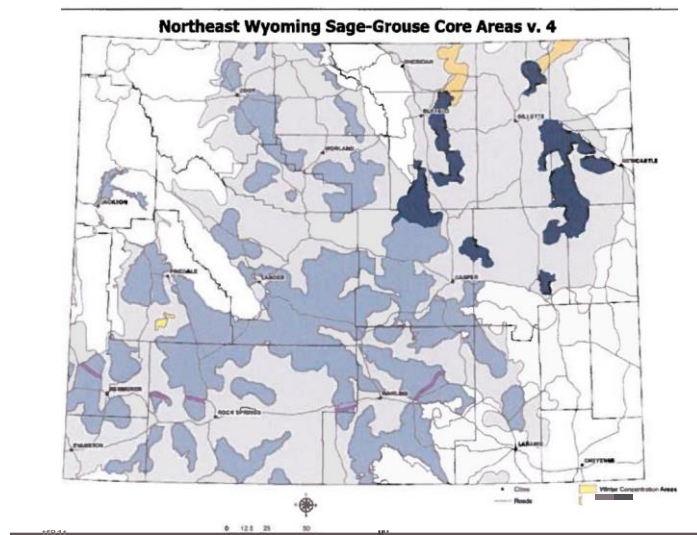
Vegetation removal should be limited to the minimum disturbance required by the project. All topsoil stripping and vegetation removal in suitable habitat is limited to between July 1 and March 14 in areas that are within 4-miles of an occupied lek. Production and maintenance activities (surface mining) outside seasonal stipulations are considered permissible once the vegetation is removed outside the seasonal stipulations. Initial disturbance in unsuitable habitat between March 15 and June 30 may be approved on a case-by-case basis. It is important that the "viability" of the topsoil is maintained. A set of BMPs for protecting top soil are outlined in Attachment G. In situations where it is established that production and maintenance activities

are impacting core population area sage-grouse, the project proponent will work with the WGFD and the permitting agency to minimize and compensate for those impacts (see Attachment A). Should the proponent and the state permitting agency not come to agreement, the Sage-Grouse Implementation Team (SGIT) will review the information and pursue enhancement activities in the impacted Core Population Area or a core area near the impact to the level necessary to offset the impact. The BLM and U.S. Forest Service both have their own appeal process to handle disagreements and will coordinate through the SGIT to offset residual impacts resulting from the appeal decision.

### Sagebrush Treatment

Sagebrush eradication is considered disturbance and will contribute to the 5% disturbance factor. Northeast Wyoming, as depicted in Figure 5, is of particular concern because sagebrush habitats rarely exceed 15% canopy cover and large acreages have already been converted from sagebrush to grassland or cropland. Absent solid demonstration that the proposed treatment will not reduce canopy cover to less than 15% within the treated area, habitat treatments in Northeast Wyoming (Figure 5) should not be conducted. In stands with less than 15% cover, treatment should be designed to ~~maintain~~ promote sagebrush establishment and/or improve sagebrush habitat. Sagebrush treatments that maintain sagebrush canopy cover at or above 15% total canopy cover within the treated acres will not be considered disturbance. The WGFD has developed a Vegetation Treatment Protocol (July 8, 2011 or updated version) for treating sagebrush to be consistent with this Executive Order. Treatments in Core Population Areas shall follow the Protocol or the treatment acreage may be considered disturbance.

Figure 5



## Reclamation

Reclamation should re-establish native grasses, forbs and shrubs during interim and final reclamation to achieve cover, species composition, and life form diversity commensurate with the surrounding plant community or desired ecological condition to benefit Greater sage-grouse and replace or enhance Greater sage-grouse habitat to the degree that environmental conditions allow. Seed mixes should include two native forbs and two native grasses with at least one [tall cool-season](#) bunchgrass species. See Attachment E. Where sagebrush establishment is prescribed, establishment is defined as meeting the standard prescribed in the individual reclamation plan. Landowners should be consulted on desired plant mix on private lands. The operator is required to control noxious and invasive weed species, including cheatgrass. [In controlling invasive plants, the operator is required to coordinate with state-level efforts and establish control approaches that complement control measures being pursued at statewide scales.](#) Rollover credit, if needed, will be outlined in the individual project reclamation plan.

[Rollover Credit](#) may be given for completion of habitat enhancements on bond release or other minimally functional habitat when detailed in a plan. These habitat enhancements may be used as [rollover](#) credit for reclamation that is slow to establish in order to maintain the disturbance cap or to improve nearby Greater sage-grouse habitat.

Conditions for determining when disturbed lands are now considered suitable can be found in Attachment F.

## Monitoring/Adaptive Response

Proponents of new projects are expected to coordinate with the permitting agency and local WGFD biologist to determine which leks [and habitats](#) need to be monitored and what data should be reported by the proponent. Certain permits may be exempted from monitoring activities pending permitting agency coordination. If declines in affected leks (using a three-year running average during any five year period relative to trends on reference leks) are determined to be caused by the project, the operator will propose [and implement approved](#) adaptive management responses to [decrease the project's impact and will propose and implement approved compensatory mitigation responses to](#) increase the number of [birds](#)sage-grouse. If the operator cannot demonstrate a restoration of [bird-grouse](#) numbers to baseline levels (established by pre disturbance surveys, reference surveys and taking into account regional and statewide [population](#) trends) within three years, operations will cease until such numbers are achieved.

## PREEXISTING OIL AND GAS UNITS

In administering oil and gas plans of development in Core Population Areas, logical and systematic planning will occur in accordance with the terms of oil and gas unit agreements established prior to August 1, 2008 and the goals of this Executive Order. In administering oil and gas plans of development in Core Population Areas added as a result of this Executive Order, logical and systematic planning will occur in accordance with the terms of oil and gas unit agreements in existence prior to the date of this Executive Order and the goals of this Executive Order. This will be accomplished by concentrating activity within existing unit boundaries even if

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Attachment B

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disturbance and density exceed Executive Order thresholds within the DDCT assessment area.

Each situation should be addressed with flexibility and an understanding of the local landscape, habitats, and other factors.

The state is dependent upon the BLM's management and database of the federal oil and gas units. We encourage the BLM to keep their records up to date with and PODs within federal oil and gas units. Federal oil and gas units in effect prior to August 1, 2008 are not subject to new Greater sage- grouse mitigation measures contained in Attachment B of this Executive Order with the exception that unit operators cannot initiate activities resulting in new surface occupancy within 0.6 miles of the perimeter of an occupied Greater sage-grouse lek. Federal oil and gas units in effect prior to the date of ~~this the 2015 Executive Order~~ but after August 1, 2008 and within Core Population Areas added as a result of this Executive Order are not subject to new Greater sage-grouse mitigation measures contained in Attachment B of this Executive Order ~~with the exception that unit operators cannot initiate activities resulting in new surface occupancy within 0.6 miles of the perimeter of an occupied Greater sage grouse lek, but are subject to mitigation measures contained in Attachment B of the Executive Order in effect when the leases were purchased.~~

For oil and gas development approved under the annual plan of development and associated surface disturbance proposals by the unit operator, the unit operator is required to complete the DDCT process including the appropriate worksheet when submitting those applications. It is understood that the level of existing and future development in pre-August 1, 2008 Federal oil and gas units may exceed Executive Order thresholds. It is understood that the level of existing and future development in Core Population Areas added as a result of this Executive Order for Federal oil and gas units may exceed Executive Order thresholds.

The DDCT results and worksheet completed for the pre-August 1, 2008 oil and gas unit activity will be used solely to track disturbance data inside the unit boundary to obtain baseline data for use in Executive Order monitoring, ~~and~~ to calculate existing and future planned disturbance, and to inform state-level habitat enhancement needs. For activity in federal oil and gas units in effect prior to the date of this Executive Order within Core Population Areas added as a result of this Executive Order, the DDCT results and worksheet completed will be used solely to track disturbance data inside the unit boundary to obtain baseline data for use in Executive Order monitoring, ~~and~~ to calculate existing and future planned disturbance, and to inform state-level habitat enhancement needs. Proponents and agencies are still expected to minimize surface disturbance and human activity whenever possible and follow all other existing, applicable lease stipulations. As projects are completed, as-built footprints will be collected and the disturbance layer updated with the as-built information.

For project proposals located outside unit boundaries, wherein a DDCT assessment area for the project proposal encompasses parts of pre-August 1, 2008 oil and gas units, disturbance will be based upon the existing disturbance, annual plans of development, or other relevant information regarding development provided by the unit operator, the BLM Reservoir Management Group or other credible sources of information such as the Wyoming Oil and Gas Conservation Commission.

For project proposals located outside unit boundaries established prior to the date of this Executive Order, wherein a DDCT assessment area for the project proposal encompasses parts of oil and gas units in Core Population Areas added as a result of this Executive Order, disturbance will be based upon the existing disturbance, annual plans of development, or other relevant information regarding development provided by the unit operator, the BLM Reservoir Management Group or other credible sources of information such as the Wyoming Oil and Gas Conservation Commission. In the absence of an annual plan of development or other relevant information, the unit affected will be considered fully developed for the purpose of calculating existing disturbance per the DDCT process.

For new development inside the boundary of a Federal oil and gas unit in effect prior to August 1, 2008 that is not directly related to oil and gas development (e.g., vegetation treatment or gravel pits), the project proponent will be required to comply with all aspects of this Executive Order. For new development inside the boundary of a Federal oil and gas unit in effect prior to the date of this Executive Order within Core Population Areas added as a result of this Executive Order that is not directly related to oil and gas development (e.g., vegetation treatment or gravel pits), the project proponent will be required to comply with all aspects of this Executive Order.

**SPECIFIC STIPULATIONS**  
**(to be applied in addition to general stipulations)**

**Oil and Gas**

Federal and State agencies should avoid to the extent possible the leasing of oil and gas resources in Core Population Areas. The suspension of federal and state leases in Core Population Areas is encouraged where there is mutual agreement by the leasing agency and the operator.

Oil and gas well pads and associated infrastructure densities are not to exceed an average of one pad per square mile (1/640) and suitable habitat disturbed not to exceed 5% of suitable habitat within the DDCT assessment area. As an example, the number of well pads within a two mile radius of the perimeter of an occupied Greater sage-grouse lek should not exceed 11, distributed preferably in a clumped pattern in one general direction away from the occupied lek.

**Mining**

For development drilling or ore body delineation drilled on tight centers, (approximately 100' X 100') the disturbance area will be delineated by the external limits of the development area. Assuming a widely-spaced disturbance pattern, the actual footprint will be considered the disturbance area.

Monitoring results will be reported annually in the mine permit annual report and to WGFD. Pre-disturbance surveys will be conducted as required by the appropriate regulatory agency.

The number of active mining development areas (e.g., operating equipment and significant human activity) is not to exceed an average of one site per square mile (1/640) within the DDCT.

Surface disturbance and surface occupancy stipulations will be waived within the Core

Population Area when implementing underground mining practices that are necessary to protect the human health, welfare, and safety of miners, mine employees, contractors and the general public. The mining practices include but are not limited to bore holes or shafts necessary to: 1) provide adequate oxygen to an underground mine; 2) supply inert gases or other substances to prevent, treat, or suppress combustion or mine fires; 3) inject mine roof stabilizing substances; and 4) remove methane from mining areas. Any surface disturbance or surface occupancy necessary to access the sites to implement these mining practices will also be exempt from any stipulation.

Coal mining operations will be allowed to continue under the regulatory and permit-specific terms and conditions authorized under the Wyoming Environmental Quality Act (WEQA) and the Surface Mining Control and Reclamation Act of 1977 (SMCRA) as administered by the Wyoming Department of Environmental Quality (WDEQ).

- i. There is the expectation that coal activities as permitted under the WEQA and SMCRA will be implemented to protect Greater sage-grouse and their habitat in Core Population Areas to a high level.
- ii. In Core Population Areas, to avoid significant "negative" impacts to Greater sage-grouse, unsuitability criteria for state high sensitive species (i.e., Greater sage-grouse), will be applied to each coal lease application during the federal coal leasing process. This process includes consultation with the State to identify any lands within the application area that are essential for maintaining high priority wildlife (i.e., Greater sage-grouse). Where appropriate, BLM will find such lands to be unsuitable for further federal coal leasing consideration. Incorporation of new leases into existing mining operations is considered allowable by the State without further regulatory obligations under the Greater sage-grouse Core Area Protection strategy, beyond the current requirements under the WEQA and SMCRA.
- iii. In Core Population Areas, it is understood that there will be exceptions for minimal impacts due to existing mines as they expand their existing operations through modified mine plans and new leases.
- iv. The USFWS has agreed that SMCRA is an adequate regulatory mechanism to protect Greater sage-grouse (USFWS letter dated November 10, 2010). Permitting under the WEQA is required to be equally or more stringent than SMCRA (Section 503 SMCRA 1977).

### Connectivity Corridors

See Attachment A.

The suspension of federal and state leases in connectivity corridors (~~see Attachment A~~) is encouraged where there is mutual agreement by the leasing agency and the operator. These suspensions should be allowed until additional information clarifies their need. Where suspensions cannot be accommodated, disturbance should be limited to 5% inclusive of suitable

Greater sage-grouse habitat and 1/640 average density over the entire DDCT assessment area and within 4 miles of the perimeter of all lek incorporated into the DDCT analysis area be limited to no more than an average of 5% per 640 acres (DDCT Process) of suitable Greater sage-grouse habitat within connectivity corridors.

For protection of connectivity corridors (see Attachment A), a NSO buffer of 0.6 miles around occupied leks or their documented perimeters is required. In addition, a March 15 to June 30 timing limitation stipulation is required within nesting habitat within 4 miles of occupied leks. Disturbance in connectivity corridors should be placed in such a way as to not disrupt the movement of grouse through the corridor, specifically potential barriers to movement should be avoided (e.g., development that spans over half of the corridor, linear disturbances that span the corridor, etc.).

In non-core habitats, disturbances should be placed in a way as to not disrupt the movement of grouse between core population areas, specifically potential barriers to movement should be avoided (e.g., linear disturbances that span potential movement areas, etc.).

### **Underground Rights of Way**

The State of Wyoming and federal management agencies have worked to develop utility corridors in current Resource Management Plans (RMPs). One of the primary purposes of these utility corridors is to encourage placement of future linear development (i.e., pipelines, water lines, fiber optics, etc.) adjacent to existing infrastructure to reduce habitat fragmentation. It is the intent of this Executive Order to continue to incentivize co-location of new pipelines and other linear disturbances in RMP designated utility corridors. New pipelines proposed in RMP established utility corridors will be required to complete DDCT calculations prior to construction. To allow for accurate future DDCT calculations for projects adjacent to but outside the utility corridors, applicants will submit to the SGIT as-built construction diagrams within 60 days of construction completion that delineate all areas of temporary and permanent disturbance in Core Population Areas including the construction and permanent rights-of-way, roads, storage yards, laydown areas and extra temporary work spaces. The pipeline proponents are not expected to meet Executive Order thresholds within the utility corridor, but the project construction would be subject to appropriate seasonal timing stipulations. The locations of permanent above-ground facilities (such as block valves, compressors, etc.) will be subject to Executive Order thresholds if located outside the designated corridor. Pipelines outside RMP designated utility corridors, but in Core Population Areas, are required to comply with the 5% disturbance per the DDCT analysis. Disturbance in the designated utility corridors is included in the 5% threshold for projects proposed near but outside the corridor.

### **Wind Energy Development**

Wind development is not recommended in Greater sage-grouse Core Population Areas, but will be reevaluated on a continuous basis as new science, information and data emerges.

## PROCESS DEVIATION OR UNDEFINED ACTIVITIES

Development proposals incorporating less restrictive stipulations or developments that are not covered by these stipulations may be considered depending on site-specific circumstances. The proponent must have data demonstrating that the alternative development proposal will avoid negative impacts to Greater sage-grouse in Core Population Areas. Proposals to deviate from standard stipulations will be considered by a team including WGFD, [local conservation and management organizations](#), and the appropriate land management and permitting agencies, with input from the USFWS. To deviate from standard stipulations project proponents need to demonstrate that the project development would meet at least one of the following conditions:

- No suitable habitat is present in one contiguous block of land that includes at least a 0.6 mile buffer between the project area and suitable habitat;
- No Greater sage-grouse use occurs in one contiguous block of land that includes at least a 0.6 mile buffer between the project area and adjacent occupied habitat, as documented by total absence of Greater sage-grouse droppings and an absence of Greater sage-grouse activity for the previous ten years; or
- Implementation of a development/mitigation plan that has demonstrated through previous research avoids negative impacts to Greater sage-grouse. The demonstration must be based on monitoring data collected and analyzed with accepted scientific based techniques.

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Attachment B

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**EXECUTIVE ORDER 2015-4**  
**ATTACHMENT C**

**Exempt ("de minimis") Activities**

The following are considered "de minimis" activities:

1. Drilling and outfitting of agricultural or residential water wells (including tank installation, pumps, and agricultural water pipelines) more than 0.6 miles from the perimeter of an occupied lek. Construction within 0.6 miles is allowed from July 1 through March 14, after a habitat evaluation has occurred, and provided development does not occur on the lek. New tanks shall have escape ramps.
2. Electric utilities are obligated by regulation to serve customers with safe and reliable electric service. Likewise, utilities must comply with agency Greater sage-grouse protective stipulations. In order to allow electric utilities the operational ability to provide and maintain service to their customers while affording adequate protection for Greater sage-grouse, distribution lines within 0.6 miles from an occupied lek are considered "de minimis" provided that: (1) construction of lines occurs from July 1 through March 14; (2) such lines are not constructed on the lek itself; (3) the lines are designed to minimize perching and nesting by raptors and corvids; and (34) a habitat evaluation has occurred. For general and operational maintenance activities of existing distribution lines, the electric utility shall use appropriate/applicable Best Management Practices for electric utilities (Avian Power Line Interaction Committee 2015). Coordination of ongoing activities with Wyoming Game and Fish Department (WGFD) is encouraged mandatory so that the State has the information necessary to inform habitat restoration and enhancement activities to the level necessary to offset the impacts to sage-grouse from these activities.
3. Preventative or required county road maintenance activities within the right-of-way (blading/smoothing, filling pot holes, graveling, culvert replacement, right-of-way maintenance, cattle guard maintenance, etc.) are considered "de minimis." Road construction activities (vertical or horizontal realignment, roadway widening, new construction, bridge replacement, etc.) are not considered "de minimis" and may require completion of a Density/Disturbance Calculation Tool (DDCT) analysis (Pendleton 2015).
4. Authorized or required cultural, paleontological, and biological resource and land surveys.
5. Emergency response and public health and safety issues.
6. Existing animal husbandry practices (including branding, docking, herding, trailing, etc.). Avoiding leks during the breeding season while conducting these activities is encouraged.
7. Existing farming practices and reclamation seeding (excluding conversion of sagebrush habitats to agricultural lands). Avoiding leks during the breeding season while conducting reclamation seeding is encouraged.

8. Construction of agricultural reservoirs, less than 10 surface acres and more than 0.6 miles from the perimeter of an occupied lek. Construction within 0.6 miles is allowed from July 1 through March 14, after a habitat evaluation has occurred, and provided that development does not occur on the lek. Design of all reservoirs in or near sage-grouse habitat to minimize mosquito breeding habitat is encouraged. Coordination of activities with the WGFD is mandatory so that the State has the information necessary to inform WNV management.
9. Construction of aquatic habitat improvements, less than ten wetland or water surface acres, more than 0.6 miles from the perimeter of an occupied lek. Construction within 0.6 miles is allowed from July 1 through March 14, after a habitat evaluation has occurred, and provided development does not occur on the lek. Coordination of activities with the WGFD is mandatory so that the State has the information necessary to inform WNV management.
10. Irrigation (excluding the conversion of sagebrush habitats to new irrigated lands).
11. Spring development; if the spring is protected with fencing and enough water remains at the site to provide mesic (wet) vegetation. Fences should be constructed to be highly visible to Greater sage-grouse (i.e., buck-and-rail, steeljack, etc.) and/or marked to minimize collision potential. Coordination of activities with the WGFD is mandatory so that the State has the information necessary to inform WNV management.
12. New fencing more than 0.6 miles from the perimeter of an occupied lek. New fences or new stretches of fences, with high potential for collisions should be marked or be designed to minimize risk; coordination with WGFD is strongly encouraged. Construction within 0.6 miles is permitted so long as construction does not occur from March 15 to June 30 or on the lek itself; Fences within 0.6 miles of a lek must be designed to minimize strike hazard (i.e., buck-and-rail); coordination with WGFD is strongly suggested. ~~mandatory.~~
13. Maintenance of existing fence.
14. Herbicide applications within existing road, pipeline, and power line rights-of-ways, application within reclamation areas for weed control, application adjacent to structures or other applications for spot treatments. Pesticide treatment for Grasshopper/Mormon cricket control following Reduced Agent-Area Treatments protocol. Other required or authorized pesticide treatments for state or county listed species or vector treatments for other diseases such as West Nile Virus. All treatments must be done in accordance with regulations and labels. Coordination with Weed & Pest Districts is strongly encouraged. Broad application of pesticides in sage-grouse nesting and brood-rearing habitats is strongly discouraged.
15. Grazing operations that utilize recognized management approaches (allotment management plans, Natural Resource Conservation Service grazing plans, prescribed grazing plans, etc.) designed to maintain rangelands in reference conditions.

It is Wyoming's primary premise that grazing activities ~~are~~ can be compatible with Greater sage- grouse conservation and may be a tool that can be used to help improve ~~habitat-Wyoming rangelands~~ for Greater sage-grouse. ~~Grazing management practices maintain or enhance Wyoming rangelands.~~ Properly managed rangelands are capable of sustaining robust Greater sage-grouse populations and a diversity of plant species important to Greater sage-grouse habitat. (USFWS, February 5, 2015, Memo to State Directors and Field Supervisors: Service Position on Livestock Grazing and Working with the Rangeland Owners to Conserve Sage-Grouse)

The State of Wyoming will collaborate with appropriate Federal agencies, local management organizations, and the permit/lease holder(s) to: (1) develop appropriate conservation objectives; (2) define a framework for evaluating situations where Greater sage-grouse objectives are not being achieved on Federal land, to determine if a causal relationship exists between improper grazing (by wildlife, wild horses or livestock) and Greater sage-grouse conservation objectives; and (3) identify and implement appropriate site-based action to achieve Greater sage-grouse conservation objectives within the framework.

If grazing adjustments are believed necessary to achieve Greater sage-grouse conservation objectives, coordination among land management agencies and permit/lease holders shall take place. Monitoring data used within the framework will, at a minimum: reflect 5 years of information, include rangeland health assessments, and require conclusion or action to be based on 3 out of 5 consecutive years of data (*i.e.*, Y1-2-3, Y2-3-4, Y3-4-5). These requirements may be waived in case of a catastrophic event such as fire. Further, the State recognizes there is a distinction between conservation objectives and land health standards and that it is possible to achieve land health standards while not achieving Greater sage-grouse conservation objectives and vice-versa. Federal agency participation in the implementation of this Executive Order in no way precludes them from managing federal surface for rangeland health.

**EXECUTIVE ORDER 2015-4  
ATTACHMENT D**

**Federal and State Permitting Agency Coordination**

**Background:**

The Density/Disturbance Calculation Tool (DDCT) process and review of project compliance with Executive Order 2015-4 will be coordinated through the DDCT web application ([ddct.wygisc.org](http://ddct.wygisc.org)).

The proponent should provide the most complete and comprehensive description of a project as possible. Splitting a project into smaller components can cause delay in review and could risk denial of a permit necessary for the entire project. It is recommended that proponents thoughtfully consider and include for review potential future development(s) and/or infrastructure associated with or that may be needed to support the current proposed project.

If the proponent has a concern that a project will not comply with this Executive Order, the proponent should contact the Wyoming Game and Fish Department (WGFD) and the appropriate land management and/or permitting agencies as soon as possible. Noncompliance with this Executive Order is not an automatic permit denial and all projects will be reviewed and potential impacts to local Greater sage-grouse populations and habitat will be assessed. Advanced planning with the permitting agencies and WGFD is the recommended way to resolve issues.

If the proponent submits a DDCT that is not in compliance, the agencies involved will need to discuss all options and potential impacts to local Greater sage-grouse populations and habitat. Initiating these discussions in advance of the final DDCT submittal may yield timelier review/decision results.

1. If federal surface/mineral is involved, the proponent works with the appropriate federal land management agency on the DDCT process and disturbance delineations, then:
  - The federal agency submits the DDCT (and worksheet) for technical review to the DDCT Data Steward at the Wyoming Geographic Information Science Center. The Data Steward will work with the federal agency in completing the technical review process (Note: the federal agency may use a contractor to make the corrections). When completed, the federal agency also submits the DDCT worksheet to the Data Steward.
  - Once technical review is completed, the Data Steward submits the DDCT final results and DDCT worksheet to WGFD Habitat Protection Program (HPP) for policy review.
  - WGFD HPP coordinates with state agencies and the federal agency if there are issues with Executive Order exceedances or compliance.
  - WGFD HPP sends a letter regarding Executive Order compliance and recommendations to the federal agency and copies the proponent and permitting agencies that may also be involved in the project.

- If agencies have questions about the recommendations, they should contact WGFD HPP.
2. If federal surface or mineral is not involved, the project proponent (NOTE: could be a consultant) completes the DDCT process, then:
- Submits the DDCT to the Data Steward for technical review. The Data Steward will work with the proponent to complete the technical review process. When completed, the proponent submits the DDCT worksheet to the Data Steward.
  - The Data Steward submits the DDCT final results and DDCT worksheet to WGFD HPP for policy review.
  - WGFD HPP coordinates with state agencies if there are issues with Executive Order exceedances or compliance.
  - WGFD HPP sends a letter regarding Executive Order compliance and recommendations to the proponent and copies permitting agencies.
  - If agencies have questions about the recommendations, they should contact WGFD HPP.

#### **Letters from WGFD:**

Letters from WGFD will determine whether or not the project complies with the process and stipulations outlined in this Executive Order and may provide recommendations on whether the permit should be issued and/or recommendations on how impacts to the Greater sage-grouse may be minimized and offset. State agencies will be the point of contact for conducting a DDCT analysis for locatable minerals. These recommendations may or may not be accepted by the permitting agency and incorporated in the conditions of the permit. If there are changes to the project, the proponent should complete the DDCT review process again.

The permitting agency should document whether or not the recommendations were accepted and incorporated as part of permit. If the permitting agency is unable to implement a recommendation, the agency should document the circumstances which preclude incorporation into the permit. For example, it is not within the agency's regulatory authority or it is not physically or legally possible to make the recommended changes.

The permitting agency is expected to coordinate with the WGFD with implementing restoration, reclamation and enhancement activities pursued to offset impacts to sage-grouse resulting from any recommendations that were not accepted, as well as residual impacts that result from the project to include impacts from projects that comply with this Executive Order.

**EXECUTIVE ORDER  
2015-4 ATTACHMENT E**

**Vegetation Monitoring for Suitability Criteria of Reclaimed  
Areas**

**Goal:** Measurements that should be taken when there is uncertainty concerning the status of reclaimed areas contributing to suitable habitat.

If sagebrush canopy cover is 5%, or greater, as measured by the method described in the Bureau of Land Management's Sage-Grouse Habitat Assessment Framework, it is considered potentially suitable habitat- (i.e., the shrub overstory is sufficient to provide sage-grouse with suitable habitat). When sagebrush canopy cover is less than 5% but within 60 meters of greater than 5% sagebrush canopy cover, the site is considered potentially suitable habitat. When sagebrush canopy cover is less than 5% and greater than 60 meters of greater than 5% sagebrush canopy cover, the site is considered unsuitable habitat.

~~When sagebrush canopy cover is less than 5%, but within 60 meters of greater than 5% sagebrush canopy cover, measurements to determine understory condition compliance, in potentially suitable habitats with the following conditions:~~

**Measure for 2 (or more) desirable native grasses at least one of which is a cool-season bunchgrass in appropriate sites.** The species present in the reclaimed area should be reflected in an appropriate reference site, described in the ecological site description (ESD) for the reclaimed site(s), or be representative of pre-disturbance species data. A reference site will be agreed upon and determined by the land management agency or owner, Wyoming Game and Fish Department and the proponent. It is recognized that reference sites could be numerous for linear features.

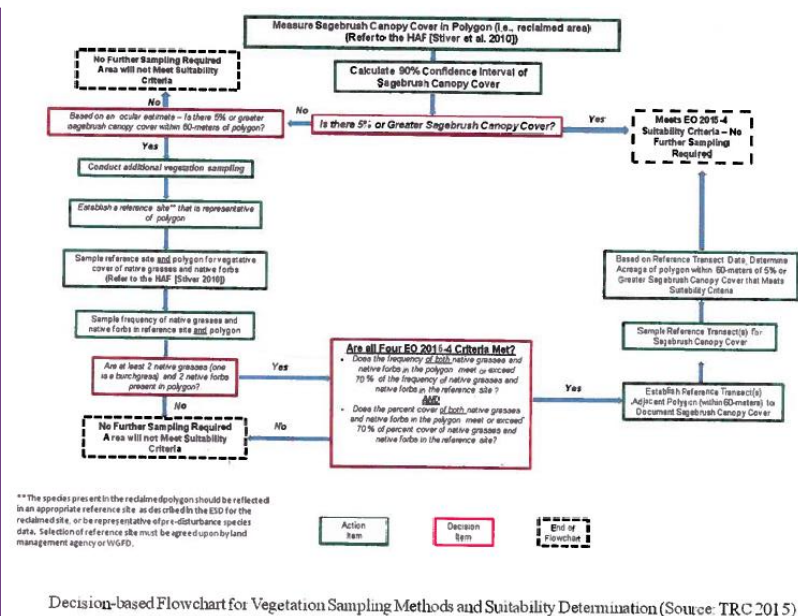
- The **frequency** of occurrence of grass is expected to meet or exceed 70% of the frequency of grass as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.  
Grass **canopy cover** measurement is expected to meet or exceed 70% of the grass canopy cover as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.

**Likewise, measure for 2 desirable native forbs.**

- The **frequency** of occurrence of forbs is expected to meet or exceed 70% of the frequency of forbs as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.
- Forbs **canopy cover** is expected to meet or exceed 70% of the forb canopy cover as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.

## Methodology

- Sampling timing for grasses, forbs, and shrubs is typically not later than July 1.
- Canopy cover for grasses/forbs: Line Point Intercept (see Habitat Assessment Framework).
- Frequency for grasses/forbs: Plot (rectangles, squares or circles) frequency computed as number of quadrats with the species of interest rooted within it, divided by the total number of quadrats that are sampled. This value will be multiplied by 100 to yield frequency as a percentage. It is recommended that a minimum of 5 to 10 transects, 30 to 50 meters ~~wide-long~~ be conducted with a minimum of 10 to 20 quadrats (e.g. Daubenmire frame or quadrat appropriate to the site) placed equidistantly along each transect.
- Canopy cover for sagebrush: Line Intercept (see Habitat Assessment Framework).
- Sample size: The Habitat Assessment Framework provides sample size recommendations. Final estimates must include a 90% confidence interval computed around the mean values estimated from vegetation sampling.



**Commented [ED3]:** Update the Stiver reference (2010) to Stiver et al. 2015, see below.

Recommend deleting this figure and that the SGIT update as necessary, given the suggested edits to the approach to establishing habitat suitability outlined above.

## Literature Cited:

Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl, eds. 2015. Sage-Grouse Habitat Assessment Framework: A Multiscale Assessment Tool. Technical Reference 6710-1. Bureau of Land Management and Western Association of Fish and Wildlife Agencies, Denver, Colorado.

**EXECUTIVE ORDER 2015-4  
ATTACHMENT F**

**Greater Sage-Grouse Habitat  
Definitions**

Greater sage-grouse require somewhat different seasonal habitats distributed over large areas to complete their life cycle. All of these habitats consist of, are associated with, or are immediately adjacent to, sagebrush. An abbreviated description of a complex system cannot incorporate all aspects of, or exceptions to, what habitats a local Greater sage-grouse population may or may not utilize. Refer to the Bureau of Land Management's Sage-Grouse Habitat Assessment Framework for further information.

**"Suitable" or "Functional"** Greater sage-grouse habitat (nesting, breeding, brood-rearing, or winter) is within the mapped occupied range of Greater sage-grouse, and:

1. has 5% or greater sagebrush canopy cover (for nesting, brood-rearing and/or winter) as measured by the point intercept method. "Sagebrush" includes all species and sub-species of the genus *Artemisia* except the mat-forming sub-shrub species: *frigida* (fringed) and *pedatifida* (birdfoot);
2. is riparian, wet meadow (native or introduced) or areas of alfalfa or other suitable forbs (brood rearing habitat) within 275 meters of sagebrush habitat with 5% or greater sagebrush canopy cover (for roosting/loafing); or
3. is reclaimed habitat containing at least 2 native grasses (at least one bunchgrass in appropriate sites) and 2 native forbs (see Reclamation, Attachment B) and no point within the grass/forb habitat is more than 60 meters from adjacent 5% or greater sagebrush cover.

**"Transitional"** Greater sage-grouse habitat is land that has been treated or burned prior to 2011 resulting in less than 5% sagebrush cover but is actively managed to meet a minimum of 5% sagebrush canopy cover with associated grasses and forbs by 2021 (as determined by analysis of local condition and trend) and may or may not be considered "disturbed". Land that does not meet the above vegetation criteria by 2021 should be considered disturbed.

Habitat treatments must meet the current Wyoming Game and Fish Department Protocols for Treating Sagebrush to be consistent with Executive Order 2015-4, Greater Sage-grouse Core Area Protection, or the habitat treated will be considered disturbed. Following wildfire, lands shall be considered "disturbed" pending an implemented management plan with trend data showing the area returning to functional Greater sage-grouse habitat.

- Areas burned by wildfire (after 2011) shall be treated as disturbed pending an implementation management plan with trend data showing the area returning to functional Greater sage-grouse habitat. This is specific only to wildfire. This direction is not intended for other incentive/mitigation/habitat treatment situations.
- The goal is to incentivize restoration of wildfire burns to return as much of the affected burned area back to suitable habitat as quickly as possible. This is a landscape effort and is not considered mitigation banking. This process should be used when wildfire is impacting the disturbance percentages, and should be considered viable aspect of the State's enhancement framework (Attachment A).

- A Technical Team comprised of the U.S. Forest Service, Bureau of Land Management, Natural Resource Conservation Service, the Wyoming Game and Fish Department, Office of State Lands and Investments Forestry Division, Wyoming Department of Agriculture (Weed and Pest), local working groups and other local conservation organizations, conservation districts and private landowners ~~would will~~ develop the plan and ensure the collection of the information necessary to establish trends in habitat condition trending data. It ~~would be~~ is the responsibility of the project proponent to conduct the monitoring. An upward trend would be determined over 3-year intervals and requires a minimum of 5 years of data as through the collection of five years of data and reviewed by the Technical Team.

**"Unsuitable"** Greater sage-grouse habitat' is land within the historic range of Greater sage- grouse that did not, does not, and will not provide Greater sage-grouse habitat due to natural ecological conditions such as badlands, canyons or forests.

**"Disturbed"** suitable Greater sage-grouse habitat' is land that has been converted from formerly suitable habitat to grasslands, croplands, mined or otherwise physically disturbed areas. To evaluate the 5% disturbance cap per average 640 acres using the Density/Disturbance Calculation Tool (DDCT), suitable habitat is considered disturbed when it is removed and unavailable for immediate Greater sage-grouse use. These areas may provide habitat at some time in the future through succession or restoration. Disturbed suitable habitats could also include those permanent disturbances such as major reservoirs and cities that once were considered suitable.

The following items are guidelines for determining disturbed habitat for the DDCT process:

- a. Long-term removal occurs when habitat is physically removed through activities that replace suitable habitat with long-term occupancy of unsuitable habitat such as a road, well pad or active mine.
- b. Short-term removal occurs when vegetation is removed in small areas, but restored to suitable habitat within a few years of disturbance, such as a successfully reclaimed pipeline, or successfully reclaimed drill hole or pit.
- c. There may be additional suitable habitat considered disturbed between two or more long- term (greater than 1 year) anthropogenic disturbance activities if the activities are located such that Greater sage-grouse use of the suitable habitat between these activities is significantly reduced due to the close proximity (less than 1.2 miles apart, 0.6 mile from each activity) and resulting cumulative effects of these large scale activities. Exceptions may be provided.
- d. Land in Northeast Wyoming (see Attachment B, Figure 8) that has had sagebrush removed post-1994 (based on Orthophoto interpretation), and not recovered to suitable habitat will be considered disturbed when using the DDCT.

**"Altered"** suitable Greater sage-grouse habitats are lands that once provided but currently do not provide habitat. These sites are characterized as being dominated by invasive plants, pinon/juniper trees, etc. that came to dominate the site through no physical disturbance that can be attributed to a single action or suite of actions. These sites are considered non-habitat in the DDCT and therefore are not incorporated into the calculation of disturbance. These sites are the focus of the State's restoration, reclamation and enhancement framework (Attachment A).

<sup>1</sup>The BLM Habitat Assessment Framework definition of "unsuitable" includes both "disturbed" and "unsuitable" habitats as defined above.

**EXECUTIVE ORDER 2015-4  
ATTACHMENT G**

**Best Management Practices for Soils on Resource Extraction Sites**

1. Get to know the nature of the soil(s) on the site where you are working. Good basic information can be obtained from the Natural Resource Conservation Service Soil Survey and more detailed information can easily be gathered by digging a few soil pits and testing some soil properties on the site (pH, Electrical Conductivity, Texture, Calcium Carbonate content and gravel content).
  2. Topsoil should be removed from the site before resource extraction activities and stored in suitable stockpiles to protect this valuable resource from loss or contamination during resource extraction. Topsoil is important to timely site reclamation. Topsoil should be salvaged while at a low moisture content. Avoid mixing A horizons with B horizons if the B horizons are salty and or clayey.
  3. Topsoil stockpiles should be located in an area where they will not be disturbed by resource extraction activities or contaminated by foreign or spilled materials. Movement of stockpiles should be kept to a minimum. Stockpiles should be designed to minimize exposure to erosional forces and bury as little undisturbed soil as possible.
  4. Upon completion of resource extraction activities or interim reclamation, topsoil should be respread on the disturbed site to approximate original conditions. Vegetation should be reestablished on the replaced soil as quickly as possible to stabilize the site and prevent erosion. Regular monitoring should be conducted to be sure that revegetation and stabilization of the site proceed according to expectations and no site degradation occurs.
  5. The use of commercial fertilizers is generally not recommended for native rangeland reestablishment due to the possibility of increased annual weeds. Soil testing should be completed prior to reestablishment of native plants on highly disturbed soils and, if necessary, the appropriate amendments should be used.
  - ~~6. It is important not to over estimate the amount of vegetation removal (habitat loss) in a given year.~~
- 7.6. In order to minimize impacts to soil resources, an alternative to large-scale advanced removal of soil is to skim the surface of the soil with a motor patrol between July 1 and March 14. This may be useful or applicable where operational plans are uncertain or where there is a desire to "live-spread" soils at some point in the period of March 14 - July 1.
- Leave as much root intact as possible.
  - Leave vegetative biomass in wind-rows to reduce wind and water erosion.

**Commented [ED4]:** Remove as unclear why this is soil care related

7. If unexpected changes in operational plans require vegetation removal between March 14 and July 1, a nest survey shall be completed by a competent biologist within 1 week prior to any vegetation removal in suitable habitat. Results shall be submitted to the appropriate regulatory agency with a copy to Wyoming Game and Fish Department (WGFD). If a nest is discovered, operations will not be allowed to proceed until after July 1 or otherwise approved by WGFD.
8. Care should be taken to minimize disturbance to the smallest footprint practical, including the crushing or compaction of areas adjoining the disturbed soils by equipment used in soil removal and storage.

Source: Peter Stahl and Jay Norton, Wyoming Reclamation and Restoration Center, University of Wyoming

**Commented [ED5]:** Encourage review of this section by Pete Stahl, given his continued research and work with Douglas Core Area Restoration Team, to ensure up-to-date

**EXECUTIVE ORDER 2015-4  
ATTACHMENT H**

**Compensatory Mitigation**

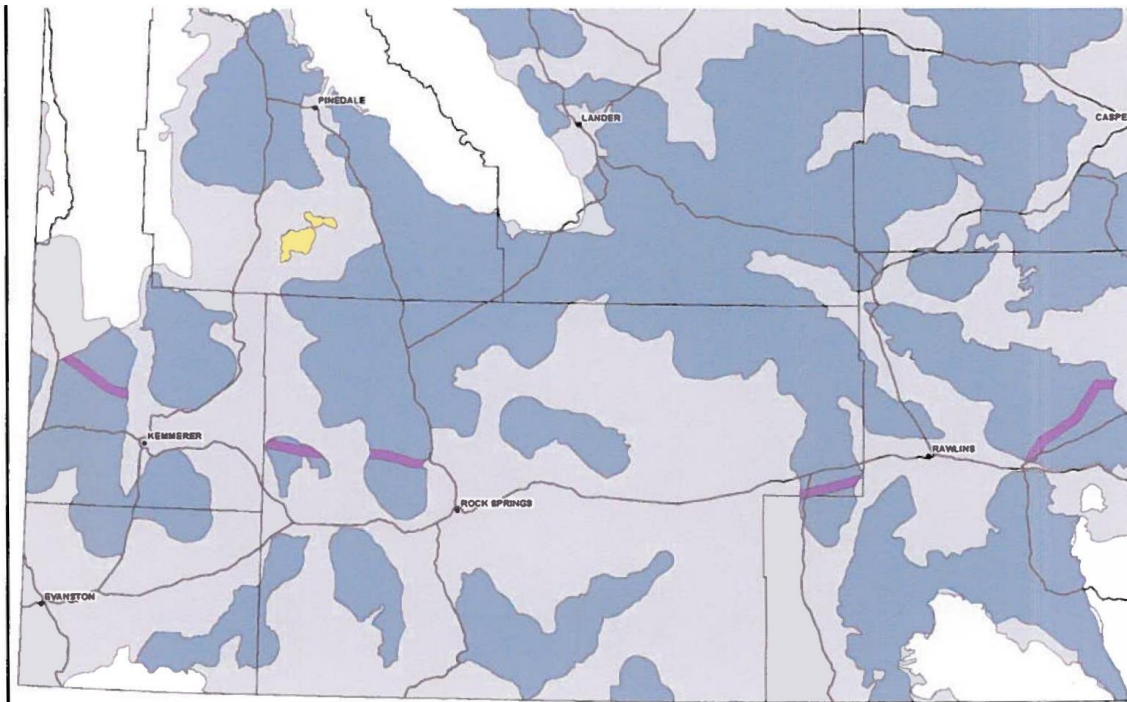
Compensatory mitigation is an essential component of a long-term conservation strategy, where avoidance and minimization are either inadequate or impossible to assure perpetuation of a ~~species of concern~~local population of sage-grouse. By its nature, compensatory mitigation may be applicable "on-site", but may often be achieved more effectively "off-site" in order to maintain functional landscapes. Compensatory mitigation must directly benefit the impacted population (i.e., be conducted in the impacted core area or a proximate core area) unless it can be shown that the impacted population is not at risk of substantial decline as a result of the impact and that the proposed mitigation has the potential to have substantial benefit to maintaining sage-grouse populations in the State. ~~a landscape-scale result that is beneficial to a species, and not a particular population or group of animals~~. Compensatory mitigation must be secured prior to any negative impact to ~~a species~~sage-grouse or its habitat occurs.

Compensatory mitigation that occurs "off-site" should complement the surrounding landscape so meet the complete life-cycle needs of ~~the species~~sage-grouse within or near the impacted core area are met, be secured for an adequate time to assure the replacement of resources that are lost as a result of any negative action impacting ~~the species~~sage-grouse, and be critically evaluated and monitored to provide adequate biological assurances that the initial impact, and any associated mitigation, will maintain ~~the species~~sage-grouse numbers and distributions and its habitat at least at pre-impact levels until the impact has been removed and the species is recovered at the site of impact. As noted in Executive Order 2018-3, ~~C~~compensatory mitigation must provide an adequate ratio of assurance that the conservation of ~~the species~~sage-grouse will not be compromised due to the failure of compensation measures to adequately protect the species, including management changes, natural disasters, and other impacts.

The State of Wyoming recognizes compensatory mitigation as a strategy that should be used when avoidance and minimization (as defined in Attachment A) are inadequate to protect Core Population Area Greater sage-grouse. Any compensatory mitigation proposal must include approval from the State of Wyoming to assure ~~the species considered is~~ sage-grouse are adequately protected, and that the benefits proposed for ~~a~~the species under the jurisdiction of the State of Wyoming are real, adequate, and fully realized prior to the time of acceptance.

EXECUTIVE ORDER 2015-4  
ATTACHMENT I

**Transmission Corridor Through Sage-Grouse Core Areas v. 4**





WGFD HPP <wgfd.hpp@wyo.gov>

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## SG Executive Order

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**Jim Magagna** <jim@wysga.org>  
To: "wgfd.hpp@wyo.gov" <wgfd.hpp@wyo.gov>

Mon, Apr 22, 2019 at 8:56 AM

Please find attached our comments on the Sage Grouse Executive orders.

*Jim Magagna*

Executive Vice President

Wyoming Stock Growers Association

Office 307-638-3942

Cell 307-630-6800

jim@wysga.org

www.wysga.org



**Sage Grouse EO comments.pdf**  
327K



## WYOMING STOCK GROWERS ASSOCIATION

*Guardian of Wyoming's Cow Country since 1872*

**President-** Dennis Sun, *Casper*

**Region I Vice President-** JD Hill, *Ranchester*

**Region III Vice President-** Mantha Philips, *Casper*

**Region V Vice President-** Reg Philips, *Dubois*

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**Region II Vice President-** Steve Paisley, *Wheatland*

**Region IV Vice President-** Brad Mead, *Jackson*

**Executive Vice President-** Jim Magagna, *Cheyenne*

**Young Producers Assembly-** Will Hudson, *Sinclair*

April 22, 2019

Governor Mark Gordon  
Idelman Mansion  
2323 Cary Ave.  
Cheyenne, WY 82002-0010

RE: Sage Grouse Executive Order

Dear Governor Gordon:

Wyoming Stock Growers Association commends you for opening the Sage Grouse Executive Orders for review and public comment. Implementation of these EO's is not only critical to maintaining Wyoming's sage grouse population; it provides both challenges and opportunities for Wyoming agriculture.

Since 2015 WSGA has, in general, supported the EO's as a preferable alternative to federal control and management. However, we continue to be troubled by provisions related to compensatory mitigation. We believe that the compensatory mitigation provisions can be appropriately modified to more effectively meet the needs of the species while providing more realistic opportunities for participation by landowners who are providing suitable habitat.

### EO 2015-4 ATTACHMENT H

This attachment calls for "an adequate ratio of assurance that the species will not be compromised due to the failure of compensation measures to adequately protect the species, including management changes, natural disasters and other impacts". WSGA firmly believes that credit providers, credit purchasers and credit administrators should not be held responsible for the impacts of "natural disasters". These disasters would have occurred absent any of the activities that led to the implementation of compensatory mitigation. They should be addressed, if deemed necessary, through a proactive state program that involves state purchase of credits. WSGA also calls for a clearer delineation of "other impacts" in this provision.

### REVISED GREATER SAGE-GROUSE—COMPENSATORY MITIGATION FRAMEWORK (2017)

Table 1: WSGA urges that minimum credit durability be reduced from fifty (50) years to thirty (30) years. It is our experience in working with family ranches in Wyoming that thirty years most often represents the maximum time frame within which ranchers are willing to make commitments that will not excessively burden future generations. Where a need for longer terms exist due to the life of the project or the failure of recovery to occur within the

*"Shaping and Living The Code of The West"*

P.O. BOX 206, CHEYENNE, WY 82003 • PH: 307.638.3942 • FX: 307.634.1210

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anticipated time frame, these needs can be met through voluntarily negotiated extensions or the purchase of additional credits.

WSGA urges that an additional category be added to this framework that places significant value on “proximity” in determining the credit-debit ratio.

EO 2018-3

Appropriate changes should be made to this EO to conform to the changes we have requested above regarding natural disasters and other impacts.

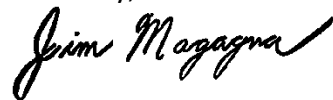
WSGA has been concerned with what we deem to be excessive complexity and resulting lengthy time frames associated with credit approval. In order to encourage landowner participation in providing qualifying credits, WSGA urges that this EO be modified to require the establishment of a comprehensive check list that can be used by conservation banks and conservation exchanges to complete most of the processes specified on behalf of individual landowners. This will serve to reduce the need for repeated interactions with the CMOG and build stronger landowner participation.

WSGA had expressed to the previous administration our concerns that the current statutory authority of the WWNRT does not enable that entity to assume the role of final credit approver. We are pleased that the Wyoming Legislature intends to address this issue. WSGA looks forward to working with you and the legislature to grant this authority to the entity that is determined to be in the best position to exercise it in an appropriate manner.

As an advisor to the Wyoming Conservation Exchange, WSGA has participated in the development of the more comprehensive comments on conservation credits being submitted by that entity. We endorse those comments.

Thank you for your consideration of our recommendations.

Sincerely,

A handwritten signature in black ink that reads "Jim Magagna". The signature is written in a cursive, flowing style.

Jim Magagna  
Executive Vice President

*“Shaping and Living The Code of The West”*

P.O. BOX 206, CHEYENNE, WY 82001 • PH: 307.638.3942 • FX: 307.634.1210

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WGFD HPP &lt;wgfd.hpp@wyo.gov&gt;

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## WWF/NWF Sage-Grouse Executive Order Comments

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**Joy Bannon** <joybannon@wyomingwildlife.org>

Wed, May 1, 2019 at 4:33 PM

To: wgfd.hpp@wyo.gov

Cc: Beth Callaway <beth.callaway@wyo.gov>, Renny Mackay <renny.mackay@wyo.gov>, Brian Nesvik <brian.nesvik@wyo.gov>, Angela Bruce <angela.bruce@wyo.gov>, Bob Budd <bob.budd@wyo.gov>, Dwayne Meadows <dmeadows@wyomingwildlife.org>, David Willms <willmsd@nwf.org>, Joy Bannon <joybannon@wyomingwildlife.org>, david.rael@wyo.gov

Good afternoon WGFD -

Please accept the attached Sage-Grouse Executive Order comments by the Wyoming Wildlife Federation and the National Wildlife Federation. If you would like to discuss our comments further, please don't hesitate to contact us.

Sincerely,  
Joy

--

Joy Bannon  
Policy Director  
Lander, WY 82520  
[joybannon@wyomingwildlife.org](mailto:joybannon@wyomingwildlife.org)  
307.287.0129



**WYOMING WILDLIFE**  
**FEDERATION**



**SGEO\_WWF\_NWF\_comments\_5.1.19\_FINAL-merged.pdf**  
684K



May 1, 2019

Governor Mark Gordon  
c/o Bob Budd  
Chairman of the Sage-Grouse Implementation Team  
2323 Carey Avenue  
Cheyenne, WY 82001  
[wgfd.hpp@wyo.gov](mailto:wgfd.hpp@wyo.gov)

Dear Governor Gordon –

Thank you for the opportunity to comment on the Wyoming Sage-Grouse Executive Order (EO) 2015-4. The EO is an important document that shows the State of Wyoming cares about and is committed to conserving Greater sage-grouse and the habitat upon which they rely. We are encouraged and thankful you and your team are continuing this legacy of Wyoming's leadership for sage-grouse conservation.

The Wyoming Wildlife Federation (WWF), established in 1937, is Wyoming's oldest and largest statewide sportsmen, conservation organization. The organization has been a member of the Sage-Grouse Implementation Team (SGIT) since its inception. In 2007, Governor Dave Freudenthal appointed Mark Winland, WWF's Board President, to the team. In 2012, after Mr. Winland's passing, Governor Matthew H. Mead appointed Joy Bannon, WWF's Policy Director, to serve on the SGIT. WWF has been highly engaged in all of the collaborative steps and founding SGIT documents, including the executive orders.

The National Wildlife Federation (NWF) is a national member-supported non-profit conservation, education, and advocacy organization. NWF is affiliated with 51 conservation organizations throughout the United States, including WWF. NWF is dedicated to conserving wildlife and other natural resources, and believes that hunting, fishing, and trapping are legitimate recreational pursuits and useful wildlife management practices. NWF works to promote responsible management of wildlife on public lands.

We recommend the following:

1. Reaffirm commitment to prioritization of development outside of core first and to the management prescriptions in the EO making up the Sage-Grouse Core Area Protection Strategy. The management prescriptions in the EO are the minimum necessary to protect sage-grouse.

- a. Management prescriptions are: 1 well per 640 acres along with a 5% threshold for surface disturbance within that 640 acres. This is for core area habitat.
      - i. Attachment B, page 12 – keep specific stipulations
      - ii. Attachment B, page 5 – keep the General Stipulations language for surface disturbance, surface occupancy, seasonal use, geophysical exploration, transportation, overhead power lines and noise.
  2. Reaffirm commitment to existing land uses and landowner activities, particularly agricultural activities on private lands by retaining the language in bullet points 3 and 4 on page 4 of Executive Order 2015-4.
3. Under the current EO, there is a hierarchical management approach for reducing harm to quality sage-grouse habitat – avoid harm, minimize harm, and when core-area grouse management has been met and exceeded, the operator must provide financial compensation to ensure adequate on-site or off-site mitigation for their harm. The state should reaffirm the commitment to a science-based mitigation framework in the EO. See Executive Order 2015-4, p. 6 n. 19, 20, 22; Attachment A, p. 5-7; Attachment H.
  - a. The State of Wyoming released its “Revised Greater Sage-Grouse Compensatory Mitigation Framework”, on July 10, 2017 (<https://wgfd.wyo.gov/WGFD/media/content/Habitat/WYGSGCompensatoryMitigationFramework-FINAL.pdf>). The framework, and associated table “Avoidance, Minimization and Compensatory Mitigation for Development in Core vs. Non-Core” produced on Oct. 28, 2018 ([https://wgfd.wyo.gov/WGFD/media/content/PDF/Habitat/Sage%20Grouse/Avoidance,-Minimization-and-Compensatory-Mitigation-for-Development-in-Core-vs-Non-Core\\_1.pdf](https://wgfd.wyo.gov/WGFD/media/content/PDF/Habitat/Sage%20Grouse/Avoidance,-Minimization-and-Compensatory-Mitigation-for-Development-in-Core-vs-Non-Core_1.pdf)), should be included or referred to in Governor Gordon’s EO.
    - i. We recommend updating the Compensatory Mitigation Framework and/or Attachment H to identify how the Department of Interior (DOI), Department of Agriculture (DOA), and the United States Fish and Wildlife Service (USFWS) will support the state of Wyoming with compensatory mitigation. The BLM amended the “*Bureau of Land Management’s Wyoming Greater Sage-Grouse Resource Management Plan Amendment Environmental Impact Statement*” to no longer require compensatory mitigation, yet they committed to support state plans. Wyoming should clarify what that process of support and level of support means when implementing compensatory mitigation on federal public lands.
4. Ensure transparency and include additional language on how the state will monitor, report, and collect data. Also, the state should provide public notice of projects, exceptions, and compensatory mitigation. This information will also be necessary for agency decision making. For example, working with individual permits and conducting cumulative impact analysis is critical for successfully executing the executive order. We suggest the following areas for further discussion.

- a. Executive Order 2015-4, page 6, numbers 19, 20, and 22
    - i. EO should be more robust in description.
  - b. Attachment A, page 5 – keep language under “Management Goals and Mitigation in the Greater Sage-Grouse Core Area Protection Strategy”
  - c. Attachment A, page 6, Avoidance – We suggest developing specific policy on when it may be appropriate to recommend not offering highly productive (core or non-core) habitats for lease.
  - d. Attachment A, page 7 – keep first paragraph.
  
- 5. Clarify and account for, on a range-wide basis, the state’s use of exceptions (WGFD), waivers, modifications, and exemptions (WY Oil and Gas Conservation Commission). Wyoming, and the public, need to know how many exceptions it grants that allow operator activity during mating season, for example. This will enable a better understanding of impacts on birds and will allow better decision-making on future exception requests. See Executive Order 2015-4, pages 2 and 6.
  - a. The same data collection and monitoring should be accomplished when executive order thresholds have been met and when the use of compensatory mitigation for harm has been triggered.
  - b. Attachment A, page 7 – keep first paragraph.
  
- 6. The EO came before the USFWS listing decision. In a revision, it would be prudent to include a reference to the USFWS 2015 not-warranted finding.
  - a. Executive Order 2015-4, page 3, after the 2<sup>nd</sup> Whereas - include a Whereas clause summarizing the reasons USFWS gave for declining to list sage-grouse.
  
- 7. A winter concentration area SGIT sub-committee has been working on management recommendations, which will be informed through a threshold research project. WGFD leads the sub-committee. An EO update should include the fact that a research project has been chosen and is moving forward.
  - a. Executive Order 2015-4, page 5, number 12, update first sentence - Research within winter concentration areas has been agreed upon and is moving forward.
  - b. Attachment A, page 5 – keep language.
  
- 8. The past six oil and gas lease sales held in Wyoming by the Bureau of Land Management have resulted in the leasing of over a million acres within Greater sage-grouse habitat. These leases were offered in both core and non-core areas. We understand that not all leases will be developed, but we cannot predict which acres will and will not be developed at the time of sale. What we do know is that by law anyone purchasing a lease must show intent to develop that lease. Therefore, we must assume that all leases will be developed, and plan accordingly. Bullet point 13 of the EO contemplates developing a “strategic plan to achieve a beneficial balance between Greater sage-grouse protection and Wyoming’s economy.” It also contemplates developing that plan with state and federal agencies, and

other relevant stakeholders. Based upon the way lease sales currently operate, we see no evidence that such an approach is being applied, and are therefore concerned that our federal partners are not adhering to the spirit and intent of bullet point 13.

- a. Bullet point 13 should remain in the EO, but we stress the need for conversations to take place among the state of Wyoming, BLM, and other stakeholders to ensure this clause is executed in good faith.
  - b. In reference to Attachment B, page 4 – The BLM should focus on leasing areas in places and with a procedure that reduces conflict. The current BLM lease sale process invites conflict. The public and WGFD are forced to react to a proposal rather than working with BLM on a proposal. We suggest that the state of Wyoming work with BLM and WGFD to establish an upfront process to discuss leases prior to them being offered for auction.
  - c. In reference to Attachment B, page 6 – We recommend putting more emphasis on protecting non-core leks and their associated habitat.
9. We support keeping v.4 maps within the EO, and do not support making and revisions to those maps at this time. See Attachment A.
10. Exempt Activities – The EO should identify hunting as a de minimis practice. Both the USFWS and the WGFD acknowledge that hunting sage-grouse does not have population level impacts (see September 5, 2014 WGFD directive), and is a de minimis practice. Year after year families and friends come together in grouse camps to hunt and share this wildlife experience with one another and their children. This practice is steeped in our culture and spans multiple generations. Hunting also provides scientific value. The WGFD relies upon bird wings collected from sage-grouse hunts for estimating sage-grouse populations. Hunting should be listed in Attachment C as a de minimis activity, which is consistent with the WGFD directive and the USFWS recognition. See Attachment B, page 5; Attachment C.
11. Suitable sage-grouse habitat and sagebrush treatment – SGIT should have a conversation about the current 15% canopy cover requirements for sagebrush treatments. Biologists have noted that 5% canopy cover is suitable habitat for sage-grouse in these treatment areas. SGIT should discuss whether it is appropriate to adjust the requirements from a minimum of 15% to 5% canopy cover in a treatment area meant to improve overall sage-grouse habitat quality. See Attachment B, page 9; Attachment E; Attachment F, page 1.
12. Reclamation and restoration - Please add a “Whereas” in the Executive Order, between pages 1-3, regarding the need to reclaim and restore disturbed greater sage-grouse habitat. Habitat quality determines the overall carrying capacity of the sagebrush ecosystem.
  - a. In addition, develop a restoration plan for disturbed habitat on a state-wide scale.

Wyoming is a leader in managing the Greater sage-grouse. For more than a decade, Wyoming has been proactive and collaborative to reduce the risk for an Endangered Species Act listing. The

all-hands, all-lands management approach works to minimize negative impacts on communities, businesses, and the economy of the cowboy state. Thank you for reviewing and incorporating our comments into the Wyoming Sage-Grouse Executive Order.

Sincerely,

Joy Bannon  
Policy Director  
Wyoming Wildlife Federation  
SGIT Member

David Willms  
Senior Director of Western Wildlife and  
Conservation  
National Wildlife Federation

cc: Beth Callaway, Natural Resource Policy Advisor, Governor Gordon  
Renny MacKay, Senior Policy Advisor, Governor Gordon  
Bob Budd, Chairman of the Sage-Grouse Implementation Team  
Angela Bruce, Deputy Director, Wyoming Game and Fish Department  
Brian Nesvik, Director, Wyoming Game and Fish Department  
David Rael, President, Wyoming Game and Fish Commission



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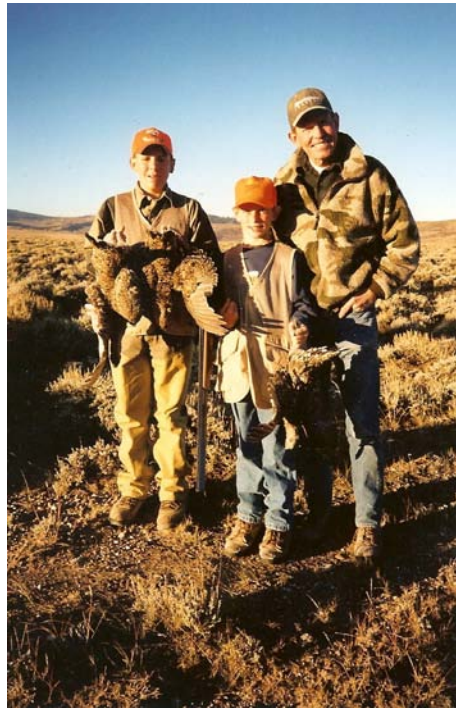
### Hunting and Sage Grouse September 5, 2014

1. The bird is not in danger of extinction in areas where hunting is allowed. Data indicates there are adequate birds to perpetuate the species at this time, and removal of some birds is not additive to population loss, most of which is driven by other factors.
2. Hunting is a regulated activity that can be curtailed or altered immediately if the need arises, and as such it does not either fragment habitat or fail to have an adequate regulatory mechanism for protection of the species, the two primary criteria considered in a listing decision.
3. Hunting has been restricted greatly, through closures, changes in seasonal timing, duration of season, bag limits and areas open to hunting. This results in a lower harvest, and less selectivity between age classes of birds.

# Hunting and Sage-Grouse:

## A Technical Review of Harvest Management On a Species of Concern in Wyoming

Revised – September 2010



Tom Christiansen  
Sage-Grouse Program Coordinator  
Wyoming Game & Fish Department

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## Executive Summary

On March 5, 2010 the U.S. Fish and Wildlife Service (USFWS) announced its determination that a range-wide listing of the greater sage-grouse (*Centrocercus urophasianus*) as threatened or endangered under the Endangered Species Act of 1973 was warranted, but precluded by higher priority listing actions. Therefore, sage-grouse are a “candidate” species under the Endangered Species Act, but remain a state-managed species. In light of this decision, concerns have been expressed about the potential impacts that hunting greater sage-grouse may have on their long-term conservation and annual status reviews conducted by the USFWS.

Harvest of greater sage-grouse currently occurs in 9 of the 11 states in which they reside. Wyoming boasts the largest and most widespread populations of grouse of any of the states. Sage-grouse hunting has generally become more conservative in Wyoming and across the West in recent decades in response to declining sage-grouse populations over the last half-century. Over the last 15 years however, the average number of males at leks has increased in Wyoming indicating an increasing statewide population. Local sub-populations more heavily influenced by anthropogenic impacts (sub-divisions, intensive energy development, large-scale conversion of habitat from sagebrush to grassland or agriculture, Interstate highways, etc.) have experienced declining populations or extirpation.

No studies have demonstrated hunting as the primary cause of reduced numbers of greater sage-grouse. However, sage-grouse are a relatively long-lived species whose existence is more dependent on survival rates than reproductive output. This strategy is different than many upland and small game species where long life and survival are sacrificed for high reproductive output. Sage-grouse demonstrate high over-winter survival, which limits the applicability of the concept of compensatory mortality with regard to hunter harvest. Therefore, the biology of sage-grouse suggests more conservative harvest management practices should be implemented compared to harvest strategies for species such as pheasants or partridges.

Changes made to hunting seasons in 1995 substantially reduced hunter participation and sage-grouse harvest rates in Wyoming. The fact that Wyoming, as a normal part of routine wildlife management, changed its hunting season strategy with the intent of better protecting hens with broods is not well understood by many in Wyoming. This action occurred prior to the species being petitioned for listing under the Endangered Species Act. The fact that the changes were made pro-actively prior to the widespread concern for sage-grouse has led to a perception that WGFD has not responded to the concerns by closing hunting seasons or otherwise minimizing harvest effects. In addition to the changes made in 1995, more recent examples of increasingly restrictive hunting seasons include: 1) hunting season closures established in 2000 for northwest and southeast Wyoming, 2) shortened seasons with reduced bag limits in 2002, 3) emergency closure of three counties in 2003 due to a West Nile virus outbreak, 4) expansion of the southeast Wyoming closure in 2007 and 2008 into northeast Wyoming, and 5) increasingly conservative seasons for areas in northeast Wyoming still open for hunting. These actions were recommended by local WGF managers in response to local conditions and data.

In their March 2010 listing decision, the USFWS concluded that the key threats to the continued survival of sage-grouse are 1) habitat loss, fragmentation, and modification and 2) inadequacy of existing regulatory mechanisms, particularly in relation to energy and other development. The USFWS also evaluated the "utilization" (e.g. hunting) of sage-grouse and concluded that "the greater sage-grouse is not threatened by overutilization for commercial, recreational, scientific, or educational purposes now or in the foreseeable future".

This is similar to its January 2005 finding whereby the USFWS determined that hunting, as currently regulated by state wildlife agencies, was not a significant threat to the conservation of sage-grouse. The expert panel used by the USFWS to make this determination ranked hunting 17th out of 19 potential threats considered.

Regulated hunting is the cornerstone of the North American Model of Wildlife Conservation, a system that keeps wildlife a public and sustainable resource, scientifically managed by professionals. Many greater sage-grouse populations can, and do, support hunting under this model.

Harvest of greater sage-grouse provides population data not easily obtained except through costly radio-telemetry studies of specific populations. Wings from hunter-harvested birds are used to determine the ratio of hens to chicks, which provides an index to annual chick production. In conjunction with population trend counts, these data contribute to understanding the dynamics of sage-grouse populations.

Hunting creates a constituency of sage-grouse advocates who are interested in seeing the needs of grouse populations are met and license fees provide revenue for management. Wyomingites are generally supportive of a multiple-use management philosophy on public lands. Regulated hunting, as recommended by state and local conservation plans, is a sustainable multiple-use activity similar to well-managed grazing and energy development. Eliminating hunting would also eliminate an ally, the hunter-conservationist, in the on-going efforts to prevent the need for listing sage-grouse under the Endangered Species Act.

Sage-grouse hunting regulations take into account biology, formal public involvement via state and local planning efforts, and informal public perceptions. Consequences of varying greatly from established guidelines and conservation plans could undermine local sage-grouse conservation efforts in Wyoming. Closing hunting seasons where biological data do not justify such a management decision would create a public perception that sage-grouse populations in Wyoming may indeed require protection under the Endangered Species Act. Conversely, not recognizing real, but biologically unfounded, concerns about hunting impacts could threaten voluntary industry-led conservation initiatives and/or generate resistance to comply with state and federal land use stipulations/regulations. Efforts to inform all stakeholders of the issues associated with sage-grouse hunting should be increased in addition to continuing generally conservative sage-grouse hunting seasons.

## **Purpose**

On March 5, 2010 the U.S. Fish and Wildlife Service (USFWS) announced its determination that a range-wide listing of the greater sage-grouse (*Centrocercus urophasianus*) as threatened or endangered under the Endangered Species Act of 1973 was warranted, but precluded by higher priority listing actions (USFWS 2010). Therefore, sage-grouse are a “candidate” species under the Endangered Species Act, but remain a state-managed species. In light of this decision, concerns have been expressed about the potential impacts of hunting greater sage-grouse may have on their long-term conservation and annual status reviews conducted by the USFWS.

## **Background**

Greater sage-grouse have been hunted throughout human history in the western United States and populations were heavily exploited by commercial and sport hunting in the late 1800s and early 1900s (Patterson 1952, Autenrieth 1981). Because of concerns about sage-grouse populations (Hornaday 1916, Girard 1937), many states prohibited harvest in the 1930s (Patterson 1952, Autenrieth 1981). By the 1950s, populations had recovered in many areas and hunting seasons were again instituted in most portions of the species’ range (Patterson 1952, Autenrieth 1981). In response to generally declining sage-grouse populations over the last half-century, sage-grouse hunting has generally become more conservative in recent decades. In the mid-1990s, after obtaining new information on sage-grouse vital rates, Idaho and Wyoming reduced harvest on sage-grouse (Reese and Connelly *in press*). Other states have recently reduced harvest opportunities to minimize the possibilities that hunting may have a negative impact on greater sage-grouse populations (Reese and Connelly *in press*). Harvest of greater sage-grouse currently occurs in 9 of the 11 western states in which they reside. The states of Washington and North Dakota prohibit harvest as do the Canadian provinces of Alberta and Saskatchewan; areas characterized by small populations in fragmented, marginal habitats. North Dakota’s current closure began in 2008 after West Nile virus presumably decreased that state’s already precarious sage-grouse population below levels that could support harvest mortality.

## **Wyoming Population Status and Trends**

Wyoming boasts the largest and most widespread populations of greater sage-grouse. Wyoming supports about 1/3 to 1/2 of the range-wide population depending on the analytical tool used. Sage-grouse populations have declined in Wyoming and across the West over the last half-century. Over the last 15 years however, the average number of males at leks has increased in Wyoming indicating an increasing statewide population. Thus, there have been long-term declines but more recent increases in sage-grouse populations in Wyoming (Figure 1). Over 44,500 sage-grouse cocks were observed on leks in Wyoming in 2006.

These trends are valid at the statewide scale. Trends are more varied at the local scale. Local sub-populations more heavily influenced by anthropogenic impacts (sub-divisions, intensive energy development, large-scale conversion of habitat from sagebrush to grassland or agriculture, Interstate highways, etc.) have experienced declining populations or extirpation.

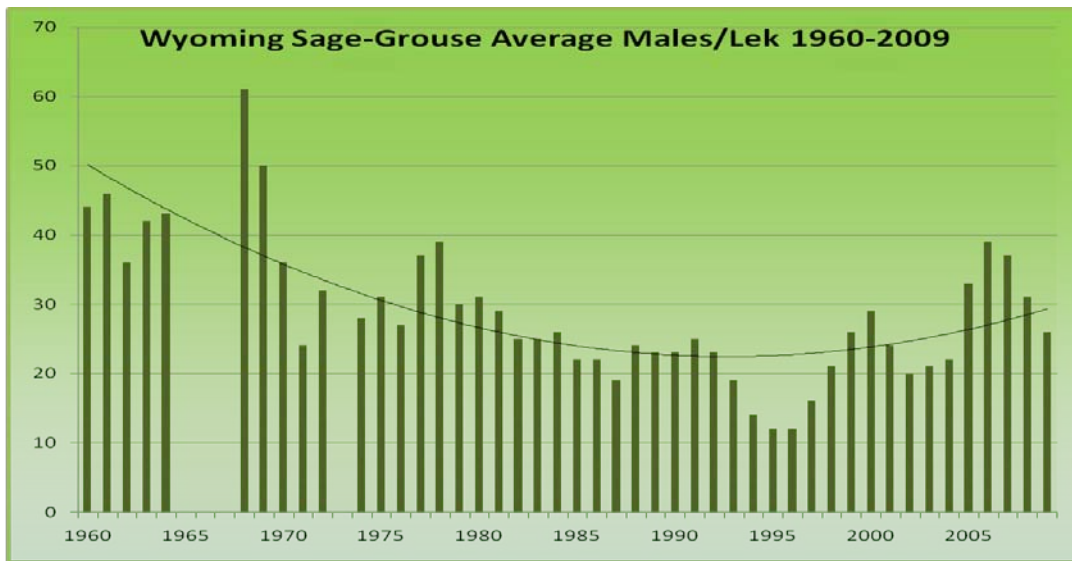


Figure 1. Sage-grouse Ave. Males/Lek in Wyoming 1960-2009 (Min 100 leks checked each year).

### Biological Considerations of Sage-Grouse Hunting [see also Reese and Connelly (*in press*)]

The general approach to harvest management of upland game was developed during the 1930s and 1940s (Wing 1951, Allen 1962, Dasmann 1964). This approach was based on evidence that showed small game populations produce a large number of young each year, most of which are available for harvest because they do not survive the winter adding to the next season's breeding population. Reproductive characteristics and effects of exploitation were believed to be the same for all species of upland game (Allen 1962, Strickland et al. 1994). Under this approach hunting is a "compensatory" form of mortality; which means that a large portion of a small game population can be harvested each fall because if not taken by hunters, they will die prior to the next breeding season from other causes. By the mid-1970s to early 1980s many western states standardized and often liberalized sage-grouse seasons compared to those held in the 1950s and 1960s. This approach was supported by studies suggesting hunting had minimal impact on sage-grouse populations (June 1963, Crawford 1982, Braun and Beck 1985, Braun 1987).

Evidence began to accumulate during the 1980s and 1990s suggesting that, under some circumstances, harvesting of some species of game birds may have an "additive" effect (Gregg 1990, Robinette and Doer 1993, Dixon et al. 1996). Additive hunting mortality results in a spring breeding population lower than if harvest had not occurred because some of the birds harvested are in addition to those that die naturally through disease, starvation, accidents or predation. Robertson and Rosenberg (1988) addressed the issue of compensatory and additive mortality and concluded that in natural populations hunting mortality usually falls between the 2 extremes of being totally additive or totally compensatory.

Life history characteristics of greater sage-grouse differ from those of many other upland game birds. Many of these other species exhibit a life history characterized by high

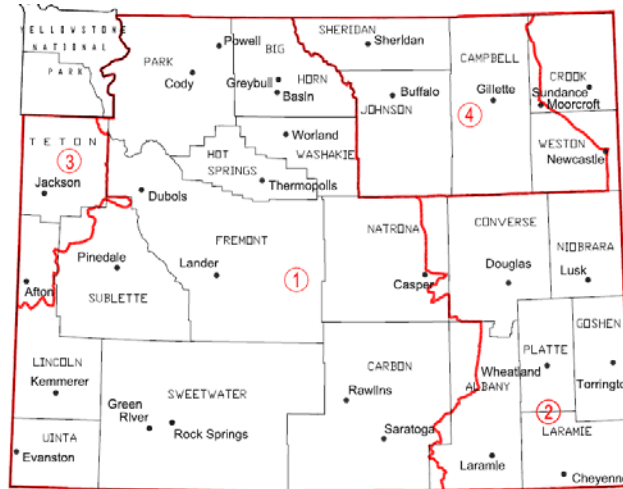
fecundity and large clutch sizes of 10-17 eggs, high annual rates of natural mortality, especially over winter (40-70%), and short life spans of 1-2 years. Greater sage-grouse, however, exhibit a life history characterized by relatively low productivity with clutch sizes of 6-9 eggs, low overwinter mortality rates of 2-20%, and long life spans of 3-6 years (Schroeder et al. 1999). Liberal hunter harvest has little impact on species exhibiting high reproductive potential (compensatory mortality) but can be additive for species like sage-grouse with lower reproductive potential (Anderson 2002:55).

Researchers in the 1970s and 1980s largely concluded hunting had little impact on sage-grouse populations (Crawford 1982, Crawford and Lutz 1985, Braun and Beck 1985), although Zunino (1987) found fall densities to be higher on unhunted study sites but populations increased on both hunted and unhunted areas. Some recent research has suggested that sage-grouse harvest mortality may not be totally compensatory (Johnson and Braun 1999, Connelly et al. 2000a, Connelly et al. 2003, Gibson *in press*). Nevertheless, research conducted to date has not demonstrated hunting as the primary cause of reduced numbers of greater sage-grouse. Greater sage-grouse do however experience low mortality over winter (Beck and Braun 1978, Connelly et al. 2000a, Remington and Braun 1988, Sherfy 1992, Wik 2002, Zablan et al. 2003, Sika 2006). Recognizing the typically low over-winter mortality of sage-grouse is vital to understanding impacts of harvest.

Connelly et al. (2003) conducted an experimental study of greater sage-grouse response to harvest. They used lek counts to assess response to 3 levels of harvest. All lek routes were in areas with the same harvest regulations in 1996 (30-day season, 3 bird bag, 6 in possession). In 1997 and continuing through 2001, regulations changed to either no hunting, a restrictive 7-day season with 1 bird bag, 2 in possession, or a moderate 23-day season with 2 bird bag, 4 in possession. Lek routes were also categorized as being in lowland areas close (< 1.5 hours drive) to major cities and towns or in high elevation mountain valleys farther from urban centers. After reducing harvest opportunities, areas that remained open to hunting had lower rates of population increase than did areas with no hunting (Connelly et al. 2003). Both the moderate and restrictive hunting seasons produced harvests that apparently slowed population recovery (Connelly et al. 2003). Populations in low elevation habitats, close to urban centers and isolated because of habitat fragmentation, may be less able to withstand a harvest rate that has little or no effect on populations in more extensive, contiguous, remote, or mesic areas (Gibson 1998, Connelly et al. 2003). Connelly et al. (2000b) guidelines suggested that no more than 10% of the autumn population be removed through harvest. Similarly, Sedinger et al. (2010) reported that harvest of less than 11% of the fall population is unlikely to have an important influence on local population dynamics of sage-grouse.

In Wyoming studies Heath et al. (1997) reported more hens were harvested when the hunting season opened on September 1 than during years with a mid-September opening date. When precipitation was at or above normal and the season commenced on or after September 15, hens and chicks dispersed away from wet sites and scattered into the uplands, and hen harvest was reduced (Heath et al. 1997). The delayed season also greatly reduced hunter numbers thereby reducing harvest (Heath et al. 1997, Table 1,

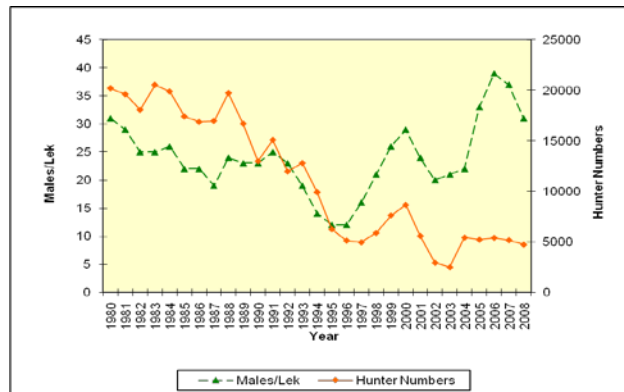
Figure 3). During a subsequent two-year study only 1 radio-collared hen was harvested out of 53 that were marked (Heath et al. 1998). Slater (2003) reported that of 105 collared birds, 50 died over a three-year period and 9 of these were attributed to hunting. Most of these occurred during an extremely dry year (2000). The hunting season began on September 16 that year but the author attributed the high harvest rate to drought conditions concentrating the birds near wet sites making them more vulnerable to harvest.



**Figure 2. Wyoming Sage-Grouse Hunt Area Map (2008-2010). Areas 2 & 3 are closed.**

Year	Season Dates	Season Length	Bag Limit Daily/Poss.	Hunters	Harvest	Males/Lek
1991	Aug 31-Sep 30	31	3/6	15,087	47,918	25
1992	Sep 1-30	30	3/6	11,976	34,388	23
1993	Sep 1-30	30	3/6	12,800	30,469	19
1994	Sep 1-30	30	3/6	9,928	26,458	14
1995	Sep 16-30	15	3/6	6,259	13,975	12
1996	Sep 21-Oct 4	14	3/6	5,138	13,192	12
1997	Sep 20-Oct 5	16	3/6	4,969	11,551	16
1998	Sep 19-Oct 4	16	3/6	5,899	16,787	21
1999	Sep 18-Oct 3	16	3/6	7,625	21,556	26
2000	Sep 16-Oct 1	16	3/6	8,667	20,685	29
2001	Sep 22-Oct 7	16	3/6	5,593	12,742	24
2002	Sep 28-Oct 6	9	2/4	2,947	4,835	20
2003	Sep 27-Oct 5	9	2/4	2,504	5,666	21
2004	Sep 23-Oct 3	11	2/4	5,436	11,783	22
2005	Sept 23-Oct 3	11	2/4	5,231	13,176	33
2006	Sep 23-Oct 3	11	2/4	5,412	12,920	39
2007	Sep 22-Oct 2	11	2/4	5,180	10,378	37
2008	Sep 20-30 (Area 1)	11	2/4	4,745	10,302	31
	Sep 20-26 (Area 4)	7				
2009	Sep 19-30 (Area 1)	12	2/4	Not Available	Not Available	26
	Sep 19-25 (Area 4)	7				
2010	Sep 18-30 (Area 1)	13	2/4	Not Available	Not Available	Not Available
	Sep 18-20 (Area 4)	3				

**Table 1. Wyoming sage-grouse harvest and males/lek statistics, 1991-2010.**



**Figure 3. Wyoming sage-grouse hunter numbers compared to sage-grouse males/lek 1980-2008.**

Length of sage-grouse hunting seasons is less important than timing. Harvest rates are dramatically reduced during the middle and later portions of the season. Of the 3,500+ wings collected in the WGFD Green River Region between 2003 and 2007, 60% were taken before the end of the opening weekend (WGFD unpublished data). Longer seasons allow the opportunity to hunt with minimal impact to the grouse population. Montana has historically allowed 60-90 day seasons with no population effects being documented. However, in response to public concern, season length in Montana was shortened in recent years from 90 to 60 days and the daily bag reduced from 4 to 2.

Hunter participation is affected by season structure, grouse population trends and hunter perceptions. When Wyoming hunting season dates were changed from a September 1 opener in 1994 to mid-September in 1995, hunter participation was reduced in half (Table 1, Figure 3). The later date was coupled with historically low populations. In this regard hunters were self-regulating as fewer hunters participated when hunting was more difficult due to lower grouse populations. Moreover, fewer hunters may have participated when there was merely a perception that grouse numbers were declining. Recent concerns for sage-grouse across their range has resulted in lower hunter participation even though populations across much of Wyoming are as high as they have been in 30 years (as indexed by average male lek attendance) (Table 1, Figure 3).

Changes made to hunting seasons in 1995 substantially reduced hunter participation and sage-grouse harvest rates in Wyoming. The fact that Wyoming, as a normal part of routine wildlife management, changed its hunting season strategy with the intent of better protecting hens with broods is not well understood by many in Wyoming. This action occurred prior to the species being petitioned for listing under the Endangered Species Act. The fact that the changes were made pro-actively prior to the widespread concern for sage-grouse has led to a perception that WGFD has not responded to the concerns by closing hunting seasons or otherwise minimizing harvest effects. In addition to the changes made in 1995, more recent examples of increasingly restrictive hunting seasons include: 1) hunting season closures established in 2000 for northwest and southeast Wyoming, 2) shortened seasons with reduced bag limits in 2002, 3) emergency closure of three counties in 2003 due to a West Nile virus outbreak, 4) expansion of the southeast Wyoming closure in 2007 and 2008 into northeast Wyoming (Figure 2), and 5) shortening the length of the hunting season from 11 days to 3 days for areas in northeast

Wyoming still open for hunting (Table 1, Figure 2). These actions were recommended by local WGF managers in response to local conditions and data.

Falconry harvest is essentially inconsequential. In 2006, a total of 180 sage-grouse were harvested by falconers statewide. But falconers, via the Wyoming Falconers Association and the North American Grouse Partnership, are highly engaged in Wyoming's sage-grouse conservation efforts via their participation on several local working groups.

Conservative hunting seasons now in place in those portions of Wyoming with open seasons, maintain harvest rates at a level projected to be well below 10% of the sage grouse available during the fall hunting season, a harvest level that should not effect sage grouse numbers each spring (Sedinger et al. 2010). In summary, recent investigations support hunting seasons that result in harvest rates low enough to allow populations to increase if habitat quality is not limiting population numbers.

### **Benefits of Sage-Grouse Hunting**

Regulated hunting is the cornerstone of the North American Model of Wildlife Conservation, a system that keeps wildlife a public and sustainable resource, scientifically managed by professionals. Many greater sage-grouse populations can, and do, support hunting under this model.

Sage-grouse hunting provides recreational, cultural and economic values (Wyoming Sage-Grouse Working Group 2003 and Local Working Groups 2006-2008). Harvest of greater sage-grouse provides population data not easily obtained except through costly radio-telemetry studies of specific populations (Reese and Connelly *in press*). Wings from hunter-harvested birds are used to determine the ratio of hens to chicks, which provides an index to annual productivity (Wyoming Sage-Grouse Working Group 2003 and Local Working Groups 2006-2008, Reese and Connelly *in press*). In conjunction with population trend counts, these data contribute to understanding the dynamics of sage-grouse populations (Reese and Connelly *in press*).

Harvest is also an incentive for conservation (Sika 2006). Hunting creates a constituency of sage-grouse advocates who are interested in seeing the needs of grouse populations are met (Wyoming Sage-Grouse Working Group 2003 and Local Working Groups 2006-2008) and license fees provide revenue for management. Wyomingites are generally supportive of a multiple-use management philosophy on public lands. Regulated hunting, as recommended by state and local conservation plans, is a sustainable multiple-use activity similar to well-managed grazing and energy development. Eliminating hunting would also eliminate an ally, the hunter-conservationist, in the on-going efforts to prevent the need for listing sage-grouse under the Endangered Species Act.

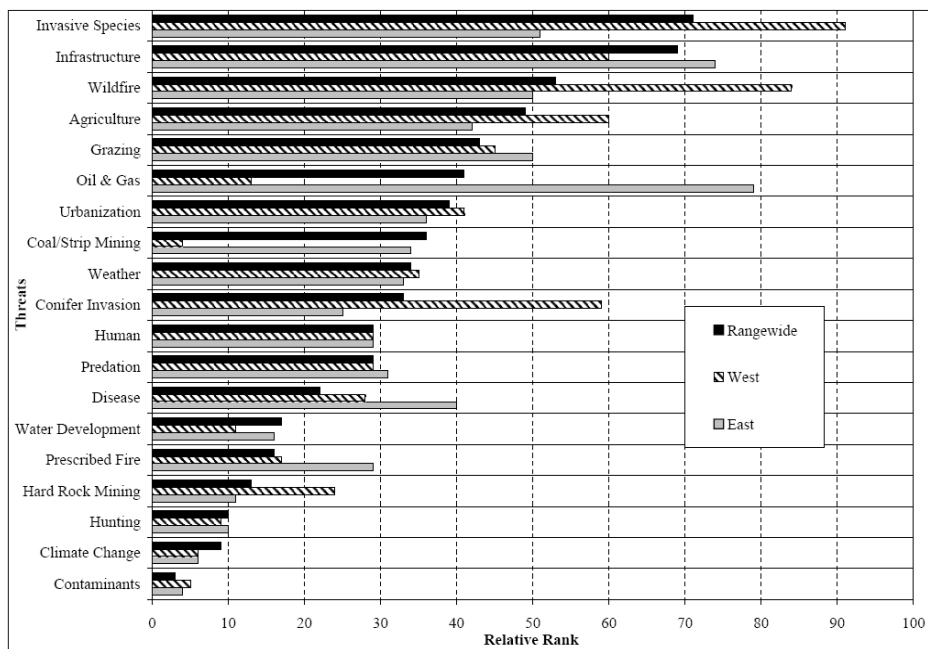
The number of hunters is declining (USFWS 2006). Recruitment of hunters has been cited as a critical need for the future of hunting and support for conservation in Wyoming (WGFD 2007). Sage-grouse provide an excellent quarry for a beginning hunter in Wyoming because they are spread across much of the state, are locally abundant, and usually allow close approach – often being seen prior to flushing allowing the novice

hunter time to prepare to shoot. Only cottontail rabbits provide a greater combination of characteristics favorable to young or beginning hunters.

### Sage-Grouse Hunting and the Endangered Species Act

In their March 2010 listing decision, the U. S. Fish and Wildlife Service concluded that the key threats to the continued survival of sage-grouse are 1) habitat loss, fragmentation, and modification and 2) inadequacy of existing regulatory mechanisms, particularly in relation to energy and other development. The USFWS also evaluated the "utilization" (e.g. hunting) of sage-grouse and concluded that "the greater sage-grouse is not threatened by overutilization for commercial, recreational, scientific, or educational purposes now or in the foreseeable future" (USFWS 2010 p. 77). The "Summary of Factor B" section of this document is appended (Appendix A).

The USFWS also examined the effects of hunting on greater sage-grouse in an earlier status review of the species. In its 2005 finding the USFWS determined that hunting as regulated by state wildlife agencies was not a significant threat to the conservation of sage-grouse (USFWS 2005). The expert panel used by the USFWS to make this determination ranked hunting 17th out of 19 potential threats considered (Figure 4).



Notes:

- Wyoming is in the "east" portion of the range.
- Infrastructure includes fences, roads, powerlines, communication towers, and pipelines, developed for any purpose.
- Agriculture includes activities primarily associated with farming.
- Grazing includes all activities primarily associated with grazing.
- Weather refers to short time events, including but not limited to late season snowstorms, drought, etc. Climate change refers to long-term, permanent weather changes, usually occurring over a period of 100 years or more.
- Conifer invasion primarily refers to pinyon/juniper.
- Human refers to an increased human presence in sagebrush ecosystems from recreational, residential, and resource development activities.

**Figure 4. Threats to sage-grouse as ranked by an expert panel convened by the U.S. Fish & Wildlife Service in 2004. The rationale for these rankings can be found in the final listing decision document (U.S. Fish & Wildlife Service, 2005).**

Similarly, Wyoming's sage-grouse LWGs have not identified hunting as a high priority issue in their plans but do provide concrete recommendations for how hunting should be managed. In addition, Governor Freudenthal's Sage-Grouse Implementation Team did not mention hunting in either their 2007 or 2010 recommendations they believed would contribute to the stabilization of sage-grouse populations and long-term conservation of sagebrush habitat in Wyoming (Wyoming Governor's Office 2007, 2010.)

### **General Harvest Recommendations**

The peer-reviewed "Guidelines to Manage Sage Grouse Populations and Their Habitats" (Connelly et al. 2000b) and Wyoming's state and local conservation plans have recommended management practices that recognize the biological concepts discussed above. The WGFD supports these guidelines and recommendations as reflected in hunting regulations.

The Wyoming Sage Grouse Working Group's Greater Sage-Grouse Conservation Plan (2003) top three recommended management practices (RMPs) for hunting are:

- 1) In stable to increasing populations (based on lek count information) maintain a 2 to 4 week hunting season with a 3-bird bag limit beginning no earlier than September 15.
- 2) If populations are declining (for 3 or more consecutive years based on lek count information) implement more conservative regulations that might include: reduced bag limits, adjusted season dates, limited quota seasons or closed seasons.
- 3) Populations should not be hunted where less than 300 birds comprise the breeding populations. (i.e. less than 100 total males are counted on the population's leks)

Wyoming's eight local conservation plans contain similar language.

Based on a review of the literature, the Connelly et al. (2000b) guidelines suggested that no more than 10% of the autumn population be removed through harvest. Similarly, Sedinger et al. (2010) reported that harvest of less than 11% of the fall population is unlikely to have an important influence on local population dynamics of sage-grouse. Harvest up to 10% of the autumn population may be appropriate, but assumes detailed and specific knowledge of population size in September or October. Unfortunately, at present it is not possible to accurately and precisely estimate sage-grouse numbers for populations without the benefit of intensive research on vital rates and lek attendance rates, but rough estimates have been made as a check on potential harvest rates.

While the lack of a statistically reliable technique to estimate sage-grouse population size does not allow for a precise estimate of harvest rates, it is apparent that harvest rates have declined over the last 30 years in Wyoming. Admittedly crude population estimates together with harvest data suggest harvest rates have declined from perhaps as high as 20% of the fall population in the late 1970s and early 1980s to below 5% in recent years.

In July 2010, the Western Association of Fish and Wildlife Agency (WAFWA) directors accepted the WAFWA Sage and Columbian Sharp-tailed Grouse Technical Committee

recommendations that: 1) the states continue to adjust hunting seasons adaptively at the population level, using the best available science and guidelines, current sage-grouse population data (e.g. lek counts, productivity estimates from wing data or brood counts, survival estimates from local radio-telemetry studies), and local circumstances that can change annually (e.g., West Nile virus, drought, or habitat loss due to wildfire), 2) the social aspects, as well as biological implications of changes to harvest seasons, should be thoughtfully considered as hunting regulations are developed, and 3) the states should critically evaluate harvest survey techniques and adjust accordingly to ensure results are sufficiently accurate and precise.

During the recent (2004-2007) upward population trend, average lek attendance rates were similar to those last documented in the late 1970s (Figure 1). Even so, Wyoming sage-grouse hunting seasons for 2007 (Table 1) were more conservative than that recommended by the state and local conservation plans (RMP #1 above). However, until there is wider awareness and acceptance of these recommendations and guidelines, more conservative hunting season structures are likely. The sage-grouse hunting seasons in recent years reflect that reality as well as the biology.

### **Sage-Grouse Hunting Season Regulations for Northeast Wyoming**

Because of heightened concern for sage-grouse numbers and potential effects of hunting in northeast Wyoming, additional restrictions have been imposed in this area.

Beginning in 2008 sage-grouse hunting was closed on an additional 5.9 million acres across northeastern Wyoming (Figure 2). These areas contain generally island populations of sage-grouse characterized by naturally and anthropogenically fragmented habitats. This closure is consistent with Northeast Local Sage-Grouse Conservation Plan, the state conservation plan and published sage-grouse management guidelines (Connelly et al. 2000b), all of which recommend sage-grouse populations not be hunted where less than 300 birds comprise the breeding populations (i.e. less than 100 total males are counted on the population's leks). Also in 2008, the WGFD established a new hunt area (Area 4) in northeast Wyoming (Table 1, Figure 2) that has a more conservative season structure (3-7 days including one weekend) than the other areas open to hunting (11-13 days with two weekends). This recommendation was based on research results (Lyon and Anderson 2003, Holloran 2005, Kaiser 2006, Aldridge and Boyce 2007, Holloran et al. 2007, Walker et al. 2007, Doherty et al. 2008 and others) that have demonstrated impacts from natural gas development. Concurrently, industry officials argued for more restrictive hunting seasons to minimize mortality in these areas. Because hunter access is highly restricted in northeast Wyoming due to the largely private land ownership, harvest is already minimal and population level effects (i.e. increases) are not anticipated to result from the closure and more conservative season.

In 2009, 2,274 male sage-grouse were counted on leks in northeast Wyoming. Excluding birds from the Casper, Douglas and Hulett areas already closed to hunting, about 1,900 male sage-grouse were counted in Hunt Area 4 in 2009; far above the 100 male threshold. A case could be made that habitat fragmentation has resulted in two populations in Area 4 (basically split by the Powder River). If that assumption is true,

about 900 male sage-grouse were counted west of the Powder River and about 1,000 east of the Powder River. Based on these roughly derived estimates, neither area population approaches the threshold for closing the hunting season for biological reasons.

From 2002-2007 an average of 333 sage-grouse were harvested in northeast Wyoming. When the hunting season was shortened and a portion of the area closed in 2008, the harvest declined to 101 birds. This is less than 1% of the 2008 estimated fall population of over 10,000 birds for the area that is open to hunting. This estimate is based on:

- documented 2008 lek attendance of 3,000 plus males
- a ratio of 2:1 females to males
- average mortality
- lower than average reproduction (since lek counts declined between 2008 and 2009)

Very limited hunting access and hunter self-regulation has resulted in low sage-grouse harvest in northeast Wyoming. When hunters perceive low numbers, they reduce their own harvest or quit hunting altogether. Further reductions in harvest and hunting opportunity will have no real or measureable impact to population trends.

If habitat fragmentation in the Powder River Basin continues to isolate areas creating smaller distinct populations, the WGFD will evaluate each of these populations as they relate to the threshold of 100 males counted. Based on our history and cautious approach, the WGFD will likely recommend closing the sage-grouse hunting season prior to reaching this threshold.

### **Summary**

Hunting opportunity for greater sage-grouse has been reduced in response to general population declines of known (e.g., disease and habitat loss) and unknown origin. While hunting has not been demonstrated as the primary cause of decline in greater sage-grouse populations, the cautionary recommendations outlined in the sage-grouse management guidelines (Connelly et al. 2000b) remain appropriate.

Sage-grouse hunting regulations take into account biology, formal public involvement via state and local planning efforts, and informal public perceptions. Consequences of varying greatly from established guidelines and conservation plans could undermine local sage-grouse conservation efforts in Wyoming. Closing hunting seasons where biological data do not justify such a management decision would create a public perception that sage-grouse populations in Wyoming may indeed require protection under the Endangered Species Act. Conversely, not recognizing real, but biologically unfounded, concerns about hunting impacts could threaten voluntary industry-led conservation initiatives and/or generate resistance to comply with state and federal land use stipulations/regulations. Efforts to inform all stakeholders of the issues associated with sage-grouse hunting should be increased in addition to continuing generally conservative sage-grouse hunting seasons.

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## **Appendix A.**

U. S. Fish and Wildlife Service (2010 *p.* 77) Summary of Factor B (overutilization for commercial, recreational, scientific, or educational purposes):

Greater sage-grouse are not used for any commercial purpose. In Canada, hunting of sage-grouse is prohibited in Alberta and Saskatchewan. In the United States, sage-grouse hunting is regulated by State wildlife agencies and hunting regulations are reevaluated yearly. We have no information that suggests any change will occur in the current situation, in which hunting greater sage-grouse is prohibited in Washington and allowed elsewhere in the range of the species in the U.S. under State regulations, which provide a basis for adjustments in annual harvest and emergency closures of hunting seasons. We have no evidence suggesting that gun and bow sport hunting has been a primary cause of range-wide declines of the greater sage-grouse in the past, or that it currently is at level that poses a significant threat to the species. However, although harvest as a singular factor does not appear to threaten the species throughout its range, negative impacts on local populations have been demonstrated and there remains a large amount of uncertainty regarding harvest impacts because of a lack of experimental evidence and conflicting studies. Significant habitat loss and fragmentation have occurred during the past several decades, and there is evidence that the sustainability of harvest levels depends to a large extent upon the quality of habitat and the health of the population. However, recognition that habitat loss is a limiting factor is not conclusive evidence that hunting has played no role in population declines or that reducing or eliminating harvest will not have an effect on population stability or recovery.

Take from poaching (illegal hunting) appears to occur at low levels in localized areas, and there is no evidence that it contributes to population declines. The information on non-consumptive recreational activities is limited to lek viewing, the extent of such activity is small, and there is no indication that it has a negative impact that contributes to population declines. Harvest by Native American tribes, and mortality that results from handling greater sage-grouse for scientific purposes appears to occur at low levels in localized areas and thus we do not consider these to be a significant threat at either the rangewide or local population levels. We know of no utilization for educational purposes. We have no reason to believe any of the above activities will increase in the future.

We do not believe data support overuse of sage-grouse as a singular factor in rangewide population declines. We note, however, that in light of present and threatened habitat loss (Factor A) and other considerations (e.g. West Nile virus outbreaks in local populations), continued close attention will be needed by States and tribes to carefully manage hunting mortality, including adjusting seasons and allowable harvest levels, and imposing emergency closures if needed.

In sum, we find that this threat is not significant to the species such that it causes the species to warrant listing under the Act.